### FINANCIAL SUMMARY

#### 3 **1.0 PURPOSE**

This evidence presents OPG's 2013 to 2015 audited consolidated financial statements and
the financial statements for OPG's prescribed facilities.

6

1 2

#### 7 2.0 OPG'S CONSOLIDATED FINANCIAL STATEMENTS

8 OPG's consolidated financial statements are prepared in accordance with Generally 9 Accepted Accounting Principles of the United States of America ("US GAAP"). OPG is a 10 reporting issuer under the *Securities Act* and is subject to continuous disclosure obligations 11 under this Act. This includes the requirement to file annual and interim financial statements 12 and certifications on internal control over financial reporting with the Ontario Securities 13 Commission.

14

OPG's Annual Reports for the years 2013 and 2014, which include audited annual consolidated financial statements and Management's Discussion and Analysis ("MD&A"), are presented in Attachments 1 and 2, respectively. OPG's 2015 audited consolidated financial statements and MD&A is presented in Attachment 3. OPG's 2016 first quarter interim consolidated financial statements (unaudited) and MD&A, which is OPG's most recent quarterly financial report, is presented in Attachment 4. OPG's financial statements, MD&A, and annual reports are also available on OPG's website at the following URL:

22 <u>http://www.opg.com/about/finance/Pages/financial-reports.aspx</u>

23

The financial statements include the accounts of OPG and the entities which OPG consolidates. In accordance with US GAAP, OPG's consolidated financial statements recognize regulatory assets and liabilities, including those for deferral and variance accounts authorized by the OEB.

28

Effective January 1, 2014, OPG revised the composition of its reportable business segments in the financial statements to reflect changes in its generation portfolio. These changes included the 48 hydroelectric generating facilities which became prescribed for rate Filed: 2016-05-27 EB-2016-0152 Exhibit A2 Tab 1 Schedule 1 Page 2 of 4

regulation effective July 1, 2014, pursuant to amended *Ontario Regulation 53/05*. Starting in
2014, the financial statements provide information for OPG's reportable segments, as
follows:

- 4 Regulated Nuclear Generation
- 5 Regulated Nuclear Waste Management
- 6 Regulated Hydroelectric
- 7 Contracted Generation Portfolio
- Services, Trading, and Other Non-Generation.
- 9

10 The Regulated – Nuclear Generation and Regulated – Nuclear Waste Management 11 segments are unchanged from prior years. In addition to those of the prescribed nuclear 12 facilities, these segments report assets, liabilities, revenues and costs related to the facilities 13 leased to Bruce Power. The items related to the facilities leased to Bruce Power are included 14 in this segment for external financial reporting purposes by virtue of their inclusion in the 15 setting of the payment amounts by the OEB.

16

Effective January 1, 2014, the Regulated – Hydroelectric segment reports the results of all of OPG's prescribed hydroelectric facilities including the 48 hydroelectric generating facilities prescribed for rate regulation effective July 1, 2014. In 2014, the segment included the results of these 48 hydroelectric facilities for the full year. The 2014 results for these facilities reflected revenues based on electricity market prices during the January 1 to October 31 period and the payment amounts established in EB-2013-0321 effective November 1.

23

The Contracted Generation Portfolio and the Services, Trading, and Other Non-Generation
 segments reflect the financial results of OPG's unregulated operations.

26

### 27 3.0 FINANCIAL STATEMENTS FOR THE PRESCRIBED FACILITIES

OPG has prepared a set of stand-alone annual financial statements for the prescribed facilities in accordance with US GAAP for the year ended December 31, 2015, with comparative information for the year ended December 31, 2014. OPG has also prepared a set of such financial statements for the year ended December 31, 2014, with comparative

Filed: 2016-05-27 EB-2016-0152 Exhibit A2 Tab 1 Schedule 1 Page 3 of 4

information for the year ended December 31, 2013. The two sets of the financial statements are presented as Attachments 5 and 6 to this exhibit. The accounting policies, allocation methodologies and assumptions applied in preparing the above prescribed facilities' financial statements are consistent with those used in preparing such financial statements in the past. The statements continue to exclude applicable assets, liabilities, revenues and costs related to the assets leased to Bruce Power, consistent with the OEB's previous decisions.

1

8 The accounting policies used to prepare the prescribed facilities' financial statements 9 continue to be consistent with those used to prepare OPG's consolidated financial 10 statements, with the exception of those related to the determination of debt and interest 11 expense. The debt balances and interest expense for the purposes of the prescribed 12 facilities' financial statements continue to be computed in a manner consistent with the 13 deemed debt and interest methodologies previously approved by the OEB. Filed: 2016-05-27 EB-2016-0152 Exhibit A2 Tab 1 Schedule 1 Page 4 of 4

1		ATTACHMENTS
2		
3	Attachment 1:	OPG's 2013 Annual Report
4		
5	Attachment 2:	OPG's 2014 Annual Report
6		
7	Attachment 3:	OPG's 2015 Management's Discussion and Analysis and Audited
8		Consolidated Financial Statements
9		
10	Attachment 4:	OPG's 2016 First Quarter Interim Consolidated Financial Statements
11		(unaudited) and Management's Discussion and Analysis
12		
13	Attachment 5:	2015 and 2014 Audited Annual Financial Statements for the
14		Prescribed Facilities
15		
16	Attachment 6:	2014 and 2013 Audited Annual Financial Statements for the
17		Prescribed Facilities

Filed: 2016-05-27 EB-2016-0152 Exhibit A2-1-1 Attachment 11 Page 1 of 152

# 2013 ANNUAL REPORT



# 2013 OVERVIEW

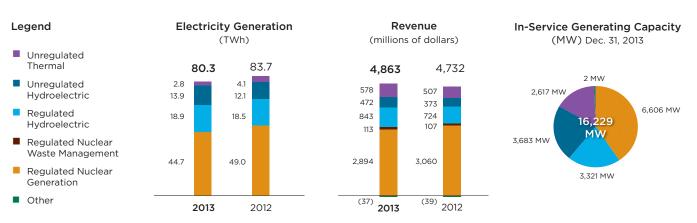
#### **Financial Highlights**

(millions of dollars - except where noted)	2013	2012
REVENUE		
Revenue	4,863	4,732
Fuel expense	708	755
Gross margin	4,155	3,977
EXPENSES		
Operations, maintenance and administration	2,747	2,648
Depreciation and amortization	963	664
Accretion on fixed asset removal and nuclear waste management liabilities	756	725
Earnings on nuclear fixed asset removal and nuclear waste management funds	(628)	(651)
Restructuring	50	3
Property and capital taxes	53	47
	3,941	3,436
Income before other income, interest and income taxes	214	541
Other income	(38)	(10)
Net interest expense	86	117
Income tax expense	31	67
Net income	135	367
ELECTRICITY PRODUCTION (TWh)	80.3	83.7
CASH FLOW		
Cash flow provided by operating activities	1,174	876

#### **Electricity Terms**

- One megawatt (MW) is one million watts. Megawatts are a measure of electricity supply capacity at a point in time.
- One kilowatt (kW) is 1,000 watts; one gigawatt (GW) is one billion watts; and one terawatt (TW) is one trillion watts.
- One kilowatt hour (kWh) is a measure of electricity demand or supply per hour. One kilowatt hour is the energy expended by fifty 20-watt compact fluorescent lights burning for one hour. The typical residential customer uses approximately 800 kWh per month.
- One megawatt hour (MWh) is 1,000 kWh; one gigawatt hour (GWh) is one million kWh; and one terawatt hour (TWh) is one billion kWh.

#### **Revenue & Operating Highlights**



Filed: 2016-05-27 EB-2016-0152 Exhibit A2-1-1 Attachment 1 Page 3 of 152

# CORPORATE PROFILE

#### **OPG** is an Ontario-based electricity generation company

whose principal business is the generation and sale of electricity in Ontario. OPG's focus is on the efficient generation and sale of electricity from its generating assets, while operating in a safe, open and environmentally-responsible manner. OPG was established under the Business Corporations Act (Ontario) and is wholly owned by the Province of Ontario.

Corporate Profile	1
Chairman's Message	2
President's Message	4
Management's Discussion and Analysis	7
Consolidated Financial Statements	80
Notes to the Consolidated Financial Stateme	nts 89
Officers	147
Ontario Power Generation Facilities	149

Darlington Unit 2 planned outage



At December 31, 2013, OPG's electricity generating portfolio had an in-service capacity of 16,229 megawatts (MW). **OPG** operates:



30

Thermal generating stations 65\*

Hydroelectric generating stations



In addition, OPG and TransCanada Energy Ltd. co-own the Portlands Energy Centre gas-fired combined cycle generating station. OPG and ATCO Power Canada Ltd. co-own the Brighton Beach gas-fired combined cycle generating station. OPG also owns two other nuclear generating stations, which are leased on a long-term basis to Bruce Power L.P. These co-owned and leased stations are incorporated into OPG's financial results but are not included in the generation portfolio statistics set out in this report.

# CHAIRMAN'S MESSAGE



"The company's diverse mix of flexible, affordable, clean generation supports our vision of electricity as environmentally sound and a catalyst for economic growth."

#### **Meeting Expectations**

The people of Ontario expect OPG to be financially-sound, well-governed, and capable of providing a reliable supply of clean electricity to the province.

Meeting these expectations is not without its challenges. New competitors to the electricity generation sector, combined with the closure of OPG's coal-fired facilities, have reduced the company's market share and revenue.

As Tom Mitchell notes in his CEO message, OPG is countering this reality by becoming more flexible, responsive and cost-effective.

OPG is equally committed to meeting Ontario's future electricity supply expectations as outlined in the government's 2013 Update to the Long-Term Energy Plan (LTEP).

The company's diverse mix of flexible, affordable, clean generation supports our vision of electricity as environmentally sound and a catalyst for economic growth -- both for the communities that use it and for communities that produce it.

#### Achievements

Many of OPG's achievements in 2013 reflect and advance this vision. These include:

- completion of the Niagara Tunnel;
- advances in the construction of the massive 438 MW Lower Mattagami hydroelectric project – including completing construction of a new hydro unit at the Little Long GS, the first of six new units being created by the project;
- partnership with Coral Rapids Power to move forward in developing a 25 MW hydropower station at New Post Creek near the Abitibi River;
- progress in converting the Atikokan thermal station to burn sustainable biomass fuel; and
- beginning a process to convert OPG's Thunder Bay thermal station to operate on advanced biomass fuel.

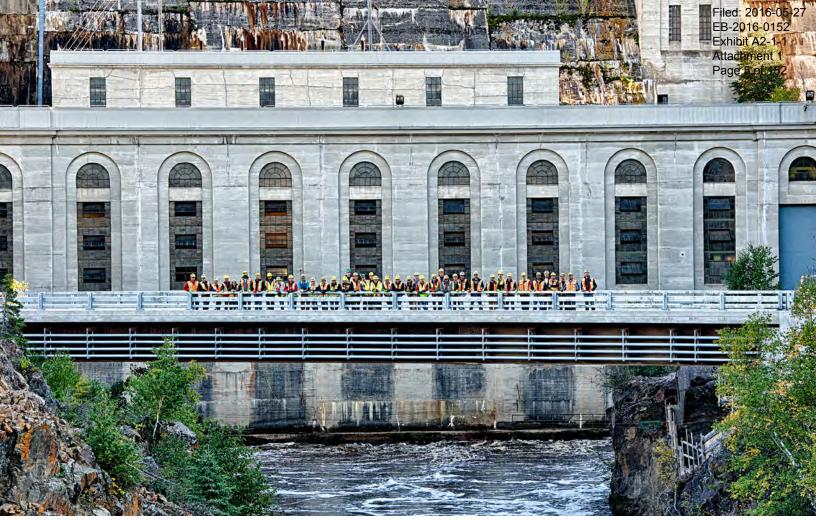
#### **Darlington Refurbishment**

In addition, OPG made solid progress in its detailed planning to refurbish the Darlington nuclear station, while continuing preparations to ensure the operation of the Pickering nuclear station to 2020. Both projects will help ensure Ontario has a sufficient supply



**Top**: OPG Board, staff and members of the Moose Cree First Nation celebrate completion of the Lower Mattagami Project's Little Long Unit 3.

**Bottom**: Working on the Darlington Unit 2 outage, one of two major planned outages at the station in 2013.



of reliable, low-emission baseload power to meet its needs over the short- and long-term.

#### **Strengthening Governance**

The Board continued its own renewal with the appointment of two new directors in 2013.

- John Herron, former President, CEO and Chief Nuclear Officer of Entergy Nuclear, brings extensive nuclear operational and executive expertise based on his more than 33 years experience as a nuclear energy professional in the U.S.; and
- Bernard Lord, former Premier of New Brunswick and President of the Canadian Wireless Telecommunications Association. As Premier, Mr. Lord planned and announced the refurbishment of New Brunswick's Point Lepreau Nuclear Generating Station.

I also wish to recognize and thank Dr. Gary Kugler for his service and superior guidance to the OPG Board since 2004. Dr. Kugler stepped down from the OPG Board after the March 2014 Board meeting. We are indebted to his years of wise counsel.

#### **Contributing to Ontario's Success**

OPG's many initiatives, and the jobs and opportunities they bring to our host communities, including First Nations and Métis communities, all help support the government's agenda as set forth in the LTEP -- to provide clean, reliable power to the people of Ontario.

The Board is especially mindful that much of OPG's transformation has been accomplished while successfully implementing Ontario's coal-closure policy and ending coal-fired generation ahead of schedule. Over the past two years, the company has effectively removed over 3,000 MW of this generation from its portfolio.

The old Smoky Falls generating station, Lower Mattagami Project.

In light of these and other transformative events in 2013, the Board wishes to recognize OPG employees – the lifeblood of the company. This includes our thermal employees whose professionalism, commitment and achievements – often in the face of exceptional demands and challenges – earned the respect and admiration of everyone in the company. We thank them – and all our employees -- for their service and substantial contribution in ensuring OPG continues to live up to the expectations Ontarians have of us.

Jace Epr.

JAKE EPP Chairman

# PRESIDENT'S MESSAGE



"OPG is making a fundamental and significant transition towards a new and exciting future as a clean, efficient, flexible and financially-sustainable organization."

In 2013, OPG continued to renew and reposition itself in response to changing realities in our business. Our generating portfolio is becoming smaller. Electricity demand is decreasing, and we now compete against a large and growing number of power producers.



**Top**: Tom Mitchell speaking at the opening of the Niagara Tunnel.

**Bottom**: Cochrane, Ontario: announcement to move forward to develop the 25 MW New Post Creek hydroelectric generating station. To continue to have a moderating effect on Ontario's electricity price – a role we believe significantly benefits Ontario's ratepayers – we are aggressively reducing costs and improving alignment of those costs with revenues. We are also identifying new opportunities to enhance our revenue and help support the electricity industry in Ontario through subsidiaries like Canadian Nuclear Partners.

#### **Developing Clean Generation**

We are undertaking these changes while implementing a substantial generation development program that is helping to rebuild and modernize Ontario's electricity infrastructure for current and future generations.

This includes developing new hydroelectric capacity in northern Ontario, refurbishing our nuclear units and converting some of our remaining coal-fired stations to burn sustainable biomass fuel.

These initiatives foster economic growth and opportunity in communities across Ontario. And, they help make OPG one of the cleanest power producers in North America.

With the closing of our major coalburning facilities at the end of 2013, over 95 per cent of our generation now comes from nuclear and hydroelectric sources – which are virtually free of emissions contributing to smog and climate change.

In short, OPG is making a fundamental and significant transition towards a new and exciting future as a clean, efficient, flexible and financiallysustainable organization.

We moved closer to this goal in 2013, but we also encountered challenges which we must address and work through. These included a low net income of \$135 million and lower than planned production levels.

Our financial performance was affected by changes in our generation operations, including the closure of our coal-burning stations. The decrease in nuclear production was mainly due to extensions to planned outages at our Pickering and Darlington facilities.





Interior of the new Smoky Falls generating station, Lower Mattagami Project.

Tom Mitchell meets with representatives of a key contractor for the Darlington Refurbishment Project.

These results have occurred against a backdrop of the new realities I mentioned above – which we are responding to strategically through business transformation.

#### **Business Transformation**

Over the years, OPG has seen its performance improve in a number of areas – including project management, nuclear performance and asset maintenance.

As we continue our focus on improved performance, we are also concentrating on another major goal - that of enhancing our efficiency and strengthening our financial sustainability.

Under business transformation, OPG expects to save an estimated \$1 billion over six years (2011-2016) by reducing headcount from ongoing operations by 20 per cent (2,330 people) of our 2011 levels. Our progress, to date includes:

- departure of 1,600 employees from Jan. 2011 - Dec. 31, 2013, representing a savings of \$275 million;
- a six per cent reduction in the number of senior positions in 2013;
- since 2010, a nine per cent drop in total base salary costs for management; and

 continued implementation of a more simplified and streamlined corporate framework.

#### **Auditor General's Report**

The findings of the Ontario Auditor General, released in her December 2013 report have served as a catalyst to accelerate our business transformation efforts, begun in 2011. While critical of some of our human resource practices, the report has provided important input to further enhance our transformation. This includes the announcing of continued pension and benefit reform for management level employees and ensuring that our hiring practices are fair and well documented with clear expectations and controls.

With the support of OPG's Board, we are implementing business transformation more rapidly, expanding its scope beyond headcount reductions to include all aspects of OPG's business – with an emphasis on improved financial performance and building a culture of efficiency.

#### 2013 Highlights

Complementing our progress in business transformation, OPG exhibited strong performance in key business areas such as safety, environment, generation development and community relations.

Workplace safety was impressive. Our two nuclear stations had accumulated at year end a total of more than 20 million hours worked without a lost time injury.

Environmental performance was equally strong - with "best ever" results being recorded in several areas - including the categories of infractions, spills and airborne tritium emissions.

I was especially pleased with our project management and generation development achievements.

We placed the Niagara Tunnel in service; successfully and professionally managed the closure of the Lambton and Nanticoke thermal stations; continued to make excellent progress on the biomass conversion of our northwest thermal stations; advanced the massive Lower Mattagami hydroelectric project - which is tracking within its approved budget and schedule; and completed construction of the Darlington Energy Complex - an innovative training and support facility that is a critical part of our plans to refurbish the four-unit Darlington nuclear station.

As noted by Jake Epp in his message, many of these initiatives are contributing – or will contribute -significantly to economic development and opportunity in the communities where they are based – including the First Nations and Métis communities of northern Ontario. These initiatives are also expanding Ontario's energy infrastructure, adding substantially to the Province's stock of low-emission, affordable generation.

I am proud of these accomplishments.

#### **Price Moderator**

I am particularly proud that despite operating in a challenging environment, maintaining our many generating stations, and managing an aggressive generation development agenda, OPG continued to moderate the price of electricity. In 2013, the price we received for our generation was 5.7 cents/kWh, while the average price received by all other Ontario generators was 9.9 cents/kWh. Ratepayers were the beneficiaries.

This is what a public power company does. We serve the people of Ontario. We do so by providing them with more than half the electricity they use - in a responsible, efficient and affordable manner.

Going forward, we intend to maintain our record of service and all it entails. As part of this commitment, we filed a rate application with the Ontario Energy Board. If approved, it would be our first base rate increase since 2008 - and would enable us to continue to get the most from our assets to the benefit of Ontario's ratepayers. These new rates would still be lower than those of other Ontario generators.

#### Acknowledgements

Throughout 2013, OPG management – myself most of all – have benefited greatly from the contribution and commitment of OPG employees. Page 8 of 152 Changing realities have made this a challenging year for many of them. This includes those in our thermal operations, who not only witnessed but helped implement the wind-down of an important and historic part of the company. In doing so, they helped make possible the single biggest climate change initiative in North America. This kind of professionalism is typical of our employees, who continue to serve Ontario with diligence, dedication and excellence. It gives me great pride to be associated with such a team.

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Mitchee

TOM MITCHELL President and CEO



The new Niagara Tunnel outlet tunnel and gate will provide more, clean, renewable power for Ontario.

Biomass silos at the OPG's Atikokan thermal generating station.



Reactor mock-up at the Darlington Energy Complex.

### MANAGEMENT'S DISCUSSION & ANALYSIS

Forward-Looking Statements	8
The Company	8
Revenue Mechanisms for Regulated and	
Unregulated Generation	1C
Highlights	12
Core Business and Strategy	19
Capability to Deliver Results	31
Business Segments	32
Key Generation and Financial Performance Indicators	34
Discussion of Operating Results by Business Segment	36
Regulated - Nuclear Generation Segment	36
Regulated - Nuclear Waste Management Segment	37
Regulated - Hydroelectric Segment	38
Unregulated - Hydroelectric Segment	39
Unregulated - Thermal Segment	4C
Other	41
Net Interest Expense	41
Income Taxes	41
Liquidity and Capital Resources	
Balance Sheet Highlights	45

Critical Accounting Policies and Estimates	46
Changes in Accounting Policies and Estimates	54
Risk Management	57
Related Party Transactions	71
Corporate Governance and Audit and Finance	
Committee Information	72
Internal Controls over Financial Reporting and	
Disclosure Controls	72
Fourth Quarter	73
Quarterly Financial Highlights	75
Supplementary Non-GAAP Financial Measures	78

### CONSOLIDATED FINANCIAL STATEMENTS

Statement of Management's Responsibility for	
Financial Information	80
Independent Auditors' Report	82
Consolidated Financial Statements	83
Notes to the Consolidated Financial Statements	89

## MANAGEMENT'S DISCUSSION AND ANALYSIS

This Management's Discussion and Analysis (MD&A) should be read together with the audited consolidated financial statements and accompanying notes of Ontario Power Generation Inc. (OPG or Company) as at and for the year ended December 31, 2013. OPG's consolidated financial statements are prepared in accordance with United States generally accepted accounting principles (US GAAP) and are presented in Canadian dollars.

As required by Ontario Regulation 395/11, as amended, a regulation under the *Financial Administration Act* (Ontario) (FAA), OPG adopted US GAAP for the presentation of its consolidated financial statements, effective January 1, 2012. The Ontario Securities Commission (OSC) also approved OPG's adoption of US GAAP for financial years that begin on or after January 1, 2012, but before January 1, 2015.

In the first quarter of 2014, the OSC approved an exemption which allows OPG to apply US GAAP up to January 1, 2019. This replaces the previous exemption. The term of the exemption is subject to certain conditions. For details, refer to the heading, *International Financial Reporting Standards*, under the section *Changes in Accounting Policies and Estimates*. This MD&A is dated March 6, 2014.

#### FORWARD-LOOKING STATEMENTS

The MD&A contains forward-looking statements that reflect OPG's current views regarding certain future events and circumstances. Any statement contained in this document that is not current or historical is a forward-looking statement. OPG generally uses words such as "anticipate", "believe", "foresee", "forecast", "estimate", "expect", "schedule", "intend", "plan", "project", "seek", "target", "goal", "strategy", "may", "will", "should", "could" and other similar words and expressions to indicate forward-looking statements. The absence of any such word or expression does not indicate that a statement is not forward-looking.

All forward-looking statements involve inherent assumptions, risks and uncertainties, including those set out under the section *Risk Management*. All forward-looking statements could be inaccurate to a material degree. In particular, forward-looking statements may contain assumptions such as those relating to OPG's fuel costs and availability, generating station performance, cost of fixed asset removal and nuclear waste management, performance of investment funds, closure or conversion of coal-fired generating stations, refurbishment of existing facilities, development and construction of new facilities, pension and other post-employment benefit (OPEB) obligations, income taxes, electricity spot market prices, proposed new legislation, the ongoing evolution of the Ontario electricity industry, environmental and other regulatory requirements, health, safety and environmental developments, business continuity events, the weather, and the impact of regulatory decisions by the Ontario Energy Board (OEB). Accordingly, undue reliance should not be placed on any forward-looking statement. The forward-looking statements included in this MD&A are made only as of the date of this MD&A. Except as required by applicable securities laws, OPG does not undertake to publicly update these forward-looking statements to reflect new information, future events or otherwise.

#### THE COMPANY

OPG is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario. OPG was established under the *Business Corporations Act* (Ontario) and is wholly owned by the Province of Ontario (Province).

During 2013, OPG operated two nuclear generating stations, five thermal generating stations, 65 hydroelectric generating stations, and two wind power turbines. In December 2013, the Nanticoke and Lambton coal-fired units were removed from service as discussed below. OPG and TransCanada Energy Ltd. co-own the Portlands Energy Centre (PEC) gas-fired combined cycle generating station (GS). OPG and ATCO Power Canada Ltd. co-own the Brighton Beach gas-fired combined cycle GS (Brighton Beach). The income of the co-owned facilities is reflected in other income. OPG also owns two other nuclear generating stations, which are leased on a long-term basis to Bruce Power L.P. (Bruce Power). Income from these leased stations is included in revenue under the Regulated – Nuclear Generation segment. These co-owned facilities and leased stations are not included in the generation portfolio statistics set out in this report.

In August 2013, OPG received a five-year operating licence which combines the Pickering A and B Nuclear generating stations' licences into a single-site licence. Since 2012, the Pickering Nuclear GS has operated as a single six-unit site.

#### **Generating Capacity**

The in-service generating capacity by business segment as of December 31 was as follows:

(MW)	2013	2012
Regulated – Nuclear Generation	6,606	6,606
Regulated – Hydroelectric	3,321	3,312
Unregulated – Hydroelectric	3,683	3,684
Unregulated – Thermal <sup>1</sup>	2,617	5,447
Other	2	2
Total	16,229	19,051

Includes the capacity of the Atikokan GS, which is being converted to use biomass. The conversion is expected to be completed in 2014.

In July 2013, the in-service capacity of the Regulated – Hydroelectric segment increased by 9 MW as a result of the completion of a major refurbishment at Unit 3 of the Sir Adam Beck 1 GS.

On December 31, 2013, the remaining units at the Nanticoke GS and the Lambton GS were removed from service in accordance with the Shareholder declaration issued in March 2013 mandating that OPG cease the use of coal at these stations by the end of 2013. This reduced the in-service generating capacity of the Unregulated – Thermal segment by 2,830 MW.

In 2014, nuclear and hydroelectric facilities are expected to produce the majority of OPG's electricity generation. These facilities produce little or no carbon emissions.

#### **OPG's Reporting Structure**

OPG receives a regulated price for electricity generated from most of its baseload hydroelectric facilities and all of the nuclear facilities that it operates. This includes the following facilities (collectively, prescribed or regulated facilities):

- Sir Adam Beck 1, 2 and Pump GS
- DeCew Falls 1 and 2 hydroelectric facilities
- R.H. Saunders hydroelectric facilities
- Pickering Nuclear GS
- Darlington Nuclear GS.

The operating results related to these regulated facilities are described under the Regulated – Nuclear Generation, Regulated – Nuclear Waste Management, and Regulated – Hydroelectric segments. For the remainder of OPG's hydroelectric facilities, the operating results are described under the Unregulated – Hydroelectric segment. The operating results from the thermal facilities are discussed in the Unregulated – Thermal segment. A description of all OPG's segments is provided under the heading, *Business Segments*.

Effective January 1, 2014, OPG revised the composition of its reporting segments to reflect changes in its generation portfolio and its internal reporting. These changes primarily reflect 48 of OPG's currently unregulated hydroelectric facilities being prescribed for rate regulation, effective July 1, 2014, and ceasing the use of coal at the Nanticoke and Lambton generating stations. For further details, refer to the discussions under the heading, *Business Segments*.

#### REVENUE MECHANISMS FOR REGULATED AND UNREGULATED GENERATION

#### **Regulated Generation**

The OEB sets the prices for electricity generated from OPG's currently regulated nuclear and hydroelectric facilities. The following are the OEB authorized regulated prices for electricity generated from these facilities for the years ended December 31:

(\$/MWh)	2013	2012
Regulated – Nuclear Generation Regulated – Nuclear Generation cost of service regulated price	51.52	51.52
Regulated – Nuclear Generation rate riders <sup>1</sup>	6.27	4.33
	57.79	55.85
Regulated – Hydroelectric		
Regulated – Hydroelectric cost of service regulated price	35.78	35.78
Regulated – Hydroelectric rate riders <sup>1</sup>	3.04	(1.65)
	38.82	34.13

<sup>1</sup> In addition to the above rate riders, in 2013 the OEB authorized interim period rate riders for the period from March 1, 2013 to December 31, 2013. This allowed for the recovery of the retroactive increase in the riders for the period from January 1, 2013 to February 28, 2013. The nuclear interim rate rider was \$0.41/MWh and the regulated hydroelectric interim rate rider was \$0.58/MWh.

The existing cost of service regulated prices have been in effect since March 1, 2011. The existing hydroelectric regulated price is subject to a hydroelectric incentive mechanism, approved by the OEB, with a portion of resulting net revenues being shared with the ratepayers. The rate riders in effect during 2013 were established by the OEB following its March 2013 decision approving a settlement agreement between OPG and intervenors on OPG's application to recover balances in deferral and variance accounts as at December 31, 2012 (Settlement Agreement). Based on the Settlement Agreement, the OEB also approved rate riders for nuclear and regulated hydroelectric generation of \$4.18/MWh and \$2.02/MWh, respectively, for the period from January 1, 2014 to December 31, 2014. The Settlement Agreement is discussed under the heading, *Recent Developments*, under the section *Highlights*.

OPG's current OEB application, filed in September 2013, requests the following:

- new cost of service regulated prices effective January 1, 2014 for the currently regulated facilities
- new rate riders to recover balances in certain deferral and variance accounts effective January 1, 2015 for the currently regulated facilities
- regulated prices for 48 of OPG's unregulated hydroelectric generating facilities, as these facilities have been prescribed for rate regulation, effective July 1, 2014, per the amendment to *Ontario Regulation 53/05*.

Details are discussed under the heading, Recent Developments.

#### **Unregulated Generation**

Electricity generated from OPG's unregulated assets receives the Ontario electricity spot market price, except where a cost recovery agreement or an Energy Supply Agreement (ESA) is in place. The thermal generating facilities that had an agreement in effect during 2013 are:

- Lambton GS and Nanticoke GS: During 2013, these coal-fired stations were subject to a Contingency Support Agreement with the Ontario Electricity Financial Corporation (OEFC). The agreement was entered into for the recovery of costs after the Shareholder's resolution and regulations pertaining to carbon dioxide (CO<sub>2</sub>) emission reductions. On November 1, 2013, the OEFC provided written notice that it would terminate the Contingency Support Agreement, effective December 31, 2013 and triggered an amendment that allows OPG to recover certain costs for the 2014 year. For further details and developments in 2013 refer to the disclosure under the heading, *Thermal Generating Assets*, under the section *Core Business and Strategy*
- Thunder Bay GS: Capacity provided by and production from one unit at this station was subject to a Reliability Must Run contract for the period from January 1, 2013 to December 31, 2013
- Lennox GS: Capacity provided by and production from this station are subject to an agreement with the Ontario Power Authority (OPA) for the period from January 1, 2013 to September 30, 2022.

In addition, OPG currently has hydroelectric ESAs with the OPA for the following:

- Lac Seul GS and Ear Falls GS
- Healey Falls GS
- Sandy Falls GS, Wawaitin GS, Lower Sturgeon GS, and Hound Chute GS
- Lower Mattagami River project generating stations. Payments under this ESA began when the first incremental unit was declared in-service in January 2014.

#### HIGHLIGHTS

#### **Overview of Results**

This section provides an overview of OPG's audited consolidated operating results for the years ended December 31. A detailed discussion of OPG's performance by reportable segment is included under the heading, *Discussion of Operating Results by Business Segment*.

(millions of dollars – except where noted)	2013	2012
Revenue	4,863	4,732
Fuel expense	708	755
Gross margin	4,155	3,977
Expenses		
Operations, maintenance and administration	2,747	2,648
Depreciation and amortization	963	664
Accretion on fixed asset removal and nuclear waste	756	725
management liabilities		
Earnings on nuclear fixed asset removal and nuclear waste	(628)	(651)
management funds		
Restructuring	50	3
Property and capital taxes	53	47
	3,941	3,436
Income before other income, interest and income taxes	214	541
Other income	(38)	(10)
Net interest expense	86	117
Income tax expense	31	67
Net income	135	367
Electricity production (TWh)	80.3	83.7
Cash flow	4 4 7 4	070
Cash flow provided by operating activities	1,174	876

#### **Segment Results**

OPG's income before interest and income taxes by segment for the years ended December 31 was as follows:

(millions of dollars)	2013	2012
Income (loss) before interest and income taxes		
Regulated – Nuclear Generation	(19)	364
Regulated – Hydroelectric	340	324
Unregulated – Hydroelectric	76	(10)
Unregulated – Thermal	(96)	(116)
Total electricity generation business segments	301	562
Regulated – Nuclear Waste Management	(122)	(68)
Other	73	57
Total income before interest and income taxes	252	551

The following table summarizes the factors affecting OPG's results for 2013, compared to 2012, on a before-tax basis:

(millions of dollars)	Electricity Generation Segments <sup>1</sup>	Regulated Nuclear Waste Management Segment	Other <sup>2</sup>	Total
(millions of dollars) Income (loss) before income taxes for 2012	562	(68)	(60)	434
Changes in gross margin:	302	(00)	(00)	-3-
Change in electricity sales price:				
Regulated generation segments	163	_	_	163
Unregulated – Hydroelectric	48	_	_	48
Change in electricity generation by segment:	40			40
Regulated – Nuclear Generation	(222)	_	_	(222)
Regulated – Hydroelectric	8	_	_	(222)
Unregulated – Hydroelectric	33	_	_	33
Increase in thermal gross margin largely due to higher revenue	112	_	_	112
from cost recovery and energy supply contracts. The increase in	112			112
contract revenues was partly due to higher depreciation expense.				
Increase in ancillary and other revenue from hydroelectric stations	32	_	-	32
Decrease in non-electricity generation revenue primarily due to	(28)	-	_	(28)
a decrease in technical services and lower isotope sales	(==)			(==)
Increase in regulatory assets for amounts recorded in variance	31	-	-	31
accounts related to nuclear production	•			•
Other changes in gross margin	(7)	6	2	1
	170	6	2	178
Changes in operations, maintenance and administration (OM&A) expense		-		
Higher nuclear expenses primarily due to an increase in outage	(71)	-	-	(71)
activities as a result of a second planned outage at the Darlington Nuclear GS				. ,
<ul> <li>Decrease in salary costs due to headcount reductions</li> </ul>	54	-	-	54
Increase in pension and OPEB costs largely due to the recognition	(48)	(1)	-	(49)
of a regulatory asset in 2012 for the Impact for USGAAP Deferral		. ,		. ,
Account established by the OEB				
<ul> <li>Other changes in OM&amp;A expenses, including escalation of labour</li> </ul>	(33)	(6)	6	(33)
costs related to collective bargaining agreements				
	(98)	(7)	6	(99)
Decrease in earnings from the nuclear fixed asset removal and	-	(23)	-	(23)
nuclear waste management funds (Nuclear Funds), net of the				
impact of the Bruce Lease Net Revenues Variance Account				
Increase in thermal depreciation expense due to the accelerated	(56)	-	-	(56)
depreciation of Lambton GS and Nanticoke GS	(2.2.7)			(0.0-)
Increase in amortization expense related to the amortization of	(267)	-	-	(267)
regulatory balances due to the new rate riders in 2013				
Lower depreciation expense mainly due to the Pickering Nuclear GS useful lives changes, reflected as a credit to ratepayers in OPG's	39	-	-	39
new rate riders				
Increase in accretion expense primarily related to an increase in the	-	(30)	-	(30)
present value of the nuclear fixed asset removal and nuclear waste		. ,		( )
management liabilities (Nuclear Liabilities), partially offset by the				
impact of the regulatory variance and deferral accounts				
Lower interest expense primarily due to an increase in interest	-	-	31	31
capitalized related to the Darlington Refurbishment project				
Increase in restructuring expense largely due to the recognition of	(47)	-	-	(47)
severance costs for Lambton GS and Nanticoke GS	× /			. /
Other changes	(2)	-	8	6
Income (loss) before income taxes for 2013	301	(122)	(13)	166

<sup>1</sup> Electricity generation segments include results of the Regulated – Nuclear Generation, Regulated – Hydroelectric, Unregulated – Hydroelectric, and Unregulated – Thermal segments.
 <sup>2</sup> Other includes results of the Other category as defined under the heading, *Business Segments*.

#### **Electricity Generation**

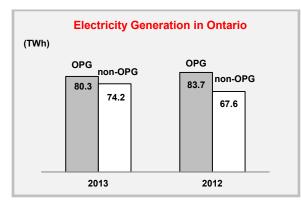
Electricity generation for the years ended December 31 was as follows:

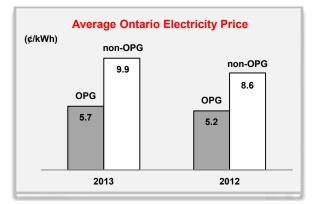
(TWh)	2013	2012
Regulated – Nuclear Generation Regulated – Hydroelectric Unregulated – Hydroelectric Unregulated – Thermal	44.7 18.9 13.9 2.8	49.0 18.5 12.1 4.1
Total OPG electricity generation	80.3	83.7
Total electricity generation by all other generators in Ontario	74.2	67.6

The decrease in 2013 from 2012 was mainly due to lower electricity generation from the Regulated – Nuclear Generation and the Unregulated – Thermal segments. Reduced generation in these segments was partially offset by higher hydroelectric generation. The factors impacting OPG's generation during 2013 are as follows:

- extensions to planned outages at the Pickering Nuclear GS and the Darlington Nuclear GS were the main factors causing the decrease in nuclear generation
- ceasing operation of coal-fired units at the Lambton and Nanticoke generating stations in 2013, in accordance with the Shareholder declaration issued in March 2013, resulted in lower thermal generation
- higher water levels and the in-service of the Niagara Tunnel contributed to higher hydroelectric generation
- an increase in Surplus Baseload Generation (SBG) conditions in 2013, described below, unfavourably affected the electricity generation by OPG's hydroelectric generating stations.

OPG's operating results are affected by changes in demand resulting from variations in seasonal weather conditions and changes in economic conditions. Ontario's primary demand was 140.7 TWh in 2013, down slightly from 141.3 TWh in 2012. Baseload supply surplus to Ontario demand continued to increase in 2013 as a result of lower primary demand combined with increased baseload generation, mainly from Bruce A Units 1 and 2 and new wind and solar capacity. The surplus to the Ontario market is managed by the Independent Electricity System Operator (IESO) through market mechanisms, including generation exports, dispatching generation offline due to low weighted average hourly Ontario electricity prices (HOEP). Dispatching generation offline could result in spilling water at hydroelectric stations, reducing generation from nuclear facilities, and reducing grid-connected renewable resources. As dispatching hydroelectric units down to reduce production is the first measure the IESO uses to reduce SBG, OPG's hydroelectric generation was significantly affected by SBG management in 2013, reducing generation by approximately 1.7 TWh. The net income impact of the SBG conditions on currently regulated hydroelectric generating stations was offset by regulatory variance accounts.





#### **Average Sales Prices and Average Revenue**

The average sales prices and average revenue for the years ended December 31 were as follows:

(¢/kWh)	2013	2012
Weighted average HOEP	2.6	2.4
Regulated – Nuclear Generation <sup>1</sup>	5.7	5.5
Regulated – Hydroelectric <sup>1</sup>	4.0	3.5
Unregulated – Hydroelectric <sup>1</sup>	2.8	2.4
Unregulated – Thermal <sup>1</sup>	2.7	2.6
Average revenue for OPG <sup>2</sup>	5.7	5.2
Average revenue for all electricity generators, excluding OPG <sup>3</sup>	9.9	8.6

<sup>1</sup> Average sales prices are computed as net generation sales or spot market sales divided by net generation volume.

<sup>2</sup> Average revenue for OPG is comprised of regulated revenues, market based revenues, and other energy revenues primarily from agreements for the Nanticoke, Lambton, Thunder Bay, and Lennox generating stations, and revenue from hydroelectric ESAs.
<sup>3</sup> Devenues for other electricity expectations are calculated as the sum of heurik Optaria demand multiplied by the UOCD plus tetral.

<sup>3</sup> Revenues for other electricity generators are calculated as the sum of hourly Ontario demand multiplied by the HOEP, plus total global adjustment payments, plus the sum of hourly net exports multiplied by the HOEP, less OPG's generation revenue.

The increase in the average sales prices for OPG's regulated segments during 2013 was a result of the OEB's approval of new rate riders, effective January 1, 2013. These rate riders were established to collect amounts that were previously recorded in variance and deferral accounts. The net income impact of these rate riders was offset by an increase in depreciation and amortization expenses. For further details, refer to the disclosure under the headings, *Revenue Mechanisms for Regulated and Unregulated Generation* and *Recent Developments*.

Average sales prices for OPG's unregulated generation segments also increased during 2013, largely due to an increase in the HOEP. During 2013, the HOEP increased due to the impact of higher market demand and higher natural gas prices, partially offset by the impact of higher non-OPG nuclear generation.

#### **Cash Flow from Operations**

Cash flow provided by operating activities for 2013 was \$1,174 million, compared to \$876 million for 2012. The increase in operating cash flow was primarily the result of:

- higher cash receipts from generation revenue after the new rate riders, established by the OEB, were
  applied
- a lower voluntary contribution to the pension fund in 2013
- lower fuel purchases, partially offset by
- higher OM&A expenses in 2013.

#### **Funds from Operations Interest Coverage**

Funds from Operations (FFO) Interest Coverage is an indicator of OPG's ability to meet interest obligations from operating cash flows. FFO Interest Coverage was 2.8 times for 2013 and 2.2 times for 2012. The FFO Interest Coverage increased primarily due to higher cash flows provided by operating activities.

The FFO Interest Coverage is not a measure in accordance with US GAAP. It should not be considered as an alternative measure to net income, cash flows from operating activities, or any other measure of performance under US GAAP. OPG believes that this non-GAAP financial measure is an effective indicator of performance and is consistent with the corporate strategy to operate on a financially sustainable basis. The definition and reconciliation of FFO Interest Coverage can be found under the headings, *Key Generation and Performance Indicators* and *Supplementary Non-GAAP Financial Measures*, respectively.

#### **Return on Equity**

Return on Equity (ROE) is an indicator of OPG's performance consistent with its objectives to operate on a financially sustainable basis and to maintain value for the Shareholder. ROE is measured over a 12-month period.

ROE for 2013 was 1.5 percent, compared to 4.2 percent for 2012. ROE decreased in 2013 primarily due to lower net income and a higher average shareholder's equity, excluding accumulated other comprehensive income (AOCI). The lower net income was primarily due to lower earnings from the Regulated – Nuclear Generation segment.

OPG's ROE reflects the relatively higher equity component in its capital structure, compared to the capital structure used by the OEB in determining regulated prices. The OEB uses a prescribed rate of return based on a deemed capital structure. The deemed capital structure assumes a 47 percent equity component, compared to OPG's existing capital structure of approximately 60 percent equity. The lower deemed equity percentage used by the OEB results in lower regulated prices, which reduces OPG's ROE. In addition, ROE reflects low levels of income primarily due to low payment amounts for the nuclear generation segment that currently do not fully recover costs and provide for a return at levels prescribed by the OEB, low electricity spot market prices, and the results of unregulated thermal operations that currently do not provide for appropriate returns on capital. OPG is undertaking initiatives to increase revenue and reduce costs. These initiatives are discussed under the heading, *Financial Sustainability*.

ROE is not a measure in accordance with US GAAP. It should not be considered an alternative measure to net income, cash flows from operating activities, or any other performance measure under US GAAP. The definition and reconciliation of ROE can be found under the headings, *Key Generation and Performance Indicators* and *Supplementary Non-GAAP Financial Measures*, respectively.

#### **Recent Developments**

#### Auditor General's 2013 Annual Report

In December 2013, the Auditor General of Ontario issued a report outlining a number of findings related to a 10-year review of OPG's human resource practices. In many cases, the report highlights areas which OPG had already addressed. It also provides insights into issues for OPG to act upon. OPG accepted the findings and committed to a number of immediate actions. OPG also committed to reporting back openly and quickly. Key actions and updates can be found at <a href="http://www.opg.com/about/management/open-and-accountable/Pages/auditor-general-report.aspx">http://www.opg.com/about/management/open-and-accountable/Pages/auditor-general-report.aspx</a>

#### Ontario's Long-Term Energy Plan

Ontario's 2013 Long-Term Energy Plan was released on December 2, 2013, replacing the 2010 Long-Term Energy Plan. Key elements of the 2013 Long-Term Energy Plan that impact OPG include:

- refurbishment at the Darlington Nuclear GS is planned to begin in 2016
- the Pickering Nuclear GS is expected to be in-service until 2020. An earlier shutdown of the units may be possible depending on projected electricity demand, the progress of the fleet refurbishment program, and the timely completion of the Clarington Transformer Station
- Ontario will not proceed at this time with construction of two new nuclear reactors at the Darlington site. However, the Ministry of Energy will work with OPG to maintain the site licence granted by the Canadian Nuclear Safety Commission (CNSC)
- the government will encourage OPG and Hydro One to explore new business lines and opportunities inside and outside Ontario.

Ontario will phase-in wind, solar, and bioenergy over a longer period than contemplated in the 2010 Long-Term Energy Plan, with 10,700 MW online by 2021. In addition, Ontario will add to the hydroelectric target, increasing the province's portfolio to 9,300 MW by 2025.

For details on OPG's response to the 2013 Long-Term Energy Plan, refer to the discussions under the heading, *Project Excellence*, under the section *Core Business and Strategy*.

#### Ceasing Coal-Fired Generation at Thermal Stations

In March 2013, the Ontario Minister of Energy issued a declaration mandating that OPG cease the use of coal at the Nanticoke and Lambton generating stations by the end of 2013. This was in advance of the previous December 31, 2014 deadline. Accordingly, the Lambton GS ceased generating electricity in September 2013 and the Nanticoke GS on December 31, 2013. Both stations are being placed in a laid-up state which could facilitate potential repowering. For further details refer to the discussion under the heading, *Core Business and Strategy – Operational Excellence – Thermal Generating Assets*.

#### OPG's OEB Applications

#### Settlement of Deferral and Variance Account Application

In March 2013, OPG reached a Settlement Agreement with intervenors on all aspects of its 2012 application to recover balances in the authorized regulatory variance and deferral accounts, as at December 31, 2012. In a decision by the OEB in March 2013, the Settlement Agreement was approved. Subsequently, the OEB issued an order establishing new rate riders effective January 1, 2013. This resulted in:

- approval of \$1,234 million recorded in the authorized accounts as at December 31, 2012
- deferral for future review of \$34 million recorded in certain accounts as at December 31, 2012
- a write-off of \$7 million of interest recorded in certain accounts as at December 31, 2012.

Pursuant to the OEB's order, the disposition of the approved account balances has been authorized to take place over periods ranging from two to 12 years beginning on January 1, 2013. Some of these periods are longer than originally requested by OPG in its application, resulting in an extended recovery of the approved balances. In particular, the authorized recovery period for the balance in the Pension and OPEB Cost Variance Account is 12 years, compared to four years proposed in OPG's application.

Other details of the Settlement Agreement include:

- OPG is also required to credit ratepayers with an additional \$94 million over the 2013 to 2014 period. The credit is related to a reduction in depreciation expense for the Pickering Nuclear GS following the changes to the useful lives of the stations effective December 31, 2012. OPG is required to refund \$47 million per year until new nuclear regulated prices are established that reflect the revised service lives for the Pickering GS units
- OPG has been authorized to recover \$633 million over the period from March 1, 2013 to December 31, 2014. In its decision and order, the OEB established new rate riders for production from the regulated facilities during the period. Refer to the disclosure under the section, *Revenue Mechanisms for Regulated and Unregulated Generation*. The increase in revenue resulting from the implementation of the new riders in 2013 was offset by an increase in amortization expense
- the OEB authorized the continuation of previously existing variance and deferral accounts, including the Pension and OPEB Cost Variance Account. The OEB also approved OPG's adoption of US GAAP for regulatory purposes.

#### 2014-2015 Cost of Service Application and Regulation of Unregulated Hydroelectric Facilities

In September 2013, OPG filed an application with the OEB for new cost of service regulated prices, proposed to be effective January 1, 2014, for production from its currently regulated nuclear and hydroelectric facilities. The requested regulated prices include the impact of the Niagara Tunnel. In addition, OPG has requested the continuation of the existing hydroelectric incentive mechanism, with some modifications. OPG's application requests

that the nuclear generation regulated price increase from \$51.52/MWh to \$69.91/MWh. The application also requests that the hydroelectric generation regulated price increase from \$35.78/MWh to \$42.31/MWh.

The decision on OPG's application will be made by the OEB following a public hearing process. This process began in the fourth quarter of 2013 and is expected to continue during 2014. New regulated prices resulting from the application are expected to remain in effect until at least the end of 2015.

In addition, OPG's application seeks new rate riders effective January 1, 2015 to recover balances in certain variance and deferral accounts as at December 31, 2013. The rate riders sought will be based on the balances in these accounts as of December 31, 2013. OPG's application included riders for nuclear and hydroelectric of \$1.59/MWh and \$2.99/MWh, respectively, based on forecast variance and deferral account balances. OPG expects to request recovery of amounts recorded in other accounts in a future application.

In November 2013, the Province amended *Ontario Regulation 53/05* to prescribe 48 of OPG's currently unregulated hydroelectric generating facilities for rate regulation, effective July 1, 2014. These facilities are currently not rate-regulated and not subject to an ESA with the OPA, and provide approximately 3,110 MW of generating capacity as at December 31, 2013. The amended regulation requires the OEB to establish the prices received for the production from these facilities. OPG's application, filed in September 2013, includes proposed regulated prices for production from these facilities effective July 1, 2014. A price of \$47.59/MWh is being requested for the newly regulated hydroelectric facilities.

The expected impact of applying rate-regulated accounting to the newly regulated hydroelectric facilities effective July 1, 2014 is discussed under the heading, *Changes in Accounting Policies and Estimates*.

In December 2013, the OEB issued an order granting OPG's request to declare the existing cost of service regulated prices for the currently regulated facilities interim, effective January 1, 2014. This may allow OPG to recover the difference between the approved new regulated prices and the current prices, for the period between January 1, 2014 and the issuance of the order establishing new regulated prices.

#### Lower Mattagami

The incremental unit at the Little Long GS was declared in-service on January 19, 2014, ahead of its original target completion date of February 2014. This is the first incremental unit to be completed on the Lower Mattagami River project. As incremental units are placed in-service, the Amisk-oo-Skow Finance Corporation, a corporation wholly owned by the Moose Cree First Nation, may acquire up to a 25 percent interest in the assets through its investment in the Lower Mattagami Limited Partnership. Further details regarding the project can be found under the heading, *Core Business and Strategy – Project Excellence*.

#### New Post Creek

In June 2013, the Minister of Energy directed the OPA to negotiate a power purchase agreement for the proposed 25 MW New Post Creek hydroelectric GS. The station is expected to be constructed through a partnership between OPG and Coral Rapids Power L.P., a wholly owned subsidiary of the Taykwa Tagamou Nation. Further details regarding this project can be found under the heading, *Core Business and Strategy – Project Excellence*.

#### Thunder Bay Conversion

In December 2013, the Minister of Energy issued a directive to the OPA to negotiate and enter into a contract for electricity from one unit at the Thunder Bay GS using advanced biomass fuel. OPG is in the process of developing detailed plans for the station modifications and fuel supply.

#### Renewable Energy

In June 2013, the Minister of Energy issued a Feed-in-Tariff Program Directive to the OPA regarding the Province's renewable energy program. Under this directive, OPG is permitted to compete in the procurement process for large renewable energy initiatives.

#### Court of Appeal Decision on OEB Ruling

In June 2013, the Court of Appeal for Ontario granted OPG's appeal of the Divisional Court of Ontario's decision regarding the March 2011 OEB ruling. The OEB ruling disallowed recovery in regulated prices of a portion of OPG's nuclear compensation costs. As a result, the OEB's decision in this area was set aside, and the matter was to be sent back to the OEB for a re-hearing. In the third quarter of 2013, the OEB sought leave to appeal the decision to the Supreme Court of Canada. In October 2013, OPG made a submission on the matter. The Supreme Court's decision on whether leave is granted is expected in early 2014.

#### CORE BUSINESS AND STRATEGY

OPG's mandate is to reliably and cost-effectively produce electricity from its diversified portfolio of generating assets, while operating in a safe, open, and environmentally responsible manner. OPG's mission is to be Ontario's low cost electricity generator through a focus on three corporate strategies:

- Operational Excellence
- Project Excellence
- Financial Sustainability.

#### **Operational Excellence**

OPG is committed to excellence in the areas of generation, the environment, and safety. Operational excellence at OPG's nuclear, hydroelectric, and thermal generating facilities is accomplished by generating safe, reliable and cost-effective electricity.

#### Nuclear Generating Assets

Performance excellence at OPG's nuclear generating facilities is defined as safely and reliably generating costeffective electricity. The four cornerstones of all nuclear activities are safety, reliability, human performance and value for money. Employee, environmental and nuclear safety are overriding priorities. The nuclear facilities continue to demonstrate strong performance and continuous improvement in these areas against industry benchmarks.

Nuclear practices and processes are regularly benchmarked against top performing nuclear facilities around the world. This allows OPG to identify, develop, and implement initiatives to further improve performance. The highlights for 2013 include:

- in July, the Pickering Nuclear GS received its best ever safety and performance industry peer review evaluation
- in August, the CNSC presented its Integrated Safety Assessment of Canadian Nuclear Power Plants for 2012. Both the Pickering Nuclear GS and the Darlington Nuclear GS received positive safety ratings from the CNSC staff, with the Darlington Nuclear GS achieving the highest possible safety rating.

Darlington also received an excellent safety and performance evaluation from the World Association of Nuclear Operators (WANO) in 2012. The result of the evaluation recognizes the Darlington Nuclear GS as one of the best performing stations in the world. These achievements demonstrate OPG's strong focus on safety and OPG's commitment to operational excellence and reliability.

In response to the Fukushima Daiichi event, OPG confirmed its stations are safe and that systems and procedures are in place to withstand significant emergencies. In 2013, a systematic review and verification of defences against external hazards was completed. The review showed that:

- the nuclear safety systems and multiple back-up power systems in place are effective
- the current design of the stations is strong and the stations are able to withstand extreme external events.

The review also provided recommendations for further opportunities to enhance the safety margin, and to be prepared for unexpected events that go beyond the extreme events that have already been considered in the design of the stations.

OPG's action plan in response to the Fukushima Daiichi event is well aligned with the CNSC's Fukushima Action Plan. The Fukushima implementation plan includes a number of key safety enhancements on providing additional back-up capability to increase OPG's flexibility to respond to unexpected and highly unlikely external events that can impact multiple units at the same time. In 2013, OPG submitted its plans for the majority of the Fukushima Action Plan items applicable to OPG to the CNSC. OPG expects to complete all the action items in 2015, with a small amount of residual work to be completed in 2016.

OPG strives to operate and maintain its nuclear facilities to optimize equipment, performance, availability, and output. Improved equipment reliability generally results in greater nuclear safety, and fewer generation interruptions. OPG has made investments to continue to improve the performance of the Pickering Nuclear GS through to 2020 with a focus on implementing equipment modifications, fuel handling reliability improvements, reducing degraded and broken equipment backlogs and completing 3,000 work orders of critical / high priority work. The investments in the Pickering Nuclear GS will help to provide a reliable electricity supply for Ontario while the Darlington reactors are being refurbished. OPG is seeing positive results of that work, including engineering and research assessments that support the safe and reliable operation of the units for a longer operating period. OPG is developing resource strategies to optimize the workforce to the end of commercial operations of Pickering, which is expected in 2020, through to the end of the safe storage period.

The successful execution of outages continues to be a high priority. OPG continues to improve the planning, execution, monitoring and reporting of outage work. Nuclear inspection and testing programs are largely driven by maintenance and regulatory requirements. These programs are designed to ensure that equipment is performing reliably and safely. The planned outage programs at Pickering Units 5 to 8 over the next five years also reflect OPG's objective of extending the operating lives of these units for approximately an additional four to six years. In addition, planning activities are underway and will continue in 2014 in preparation for the Vacuum Building Outage scheduled to be executed at the Darlington Nuclear GS in 2015.

Process and procedural compliance is monitored and managed to ensure a strong safety and performance culture at the nuclear stations. OPG continues to implement training programs to improve employee performance and promote leadership development.

Delivering solutions that provide the best combination of safety, cost, and quality, and establishing challenging financial targets based on comprehensive benchmarking continue to be a vital part of OPG's strategy to improve nuclear plant and employee performance. Staffing targets continue to be reviewed and adjusted where necessary to reduce operating costs, while ensuring safety is not compromised.

Since 2012, the Pickering Nuclear generating stations have operated as a single six-unit site. Efficiencies have been achieved through the operational amalgamation of the Pickering A and B Nuclear generating stations. OPG successfully combined the work management, maintenance and operational planning departments fully integrating the two Pickering Nuclear generating stations.

In 2012, OPG applied to the CNSC for a five-year operating licence, which combines the Pickering A and B Nuclear generating stations' licences into a single-site licence. Following the CNSC public hearings on OPG's application, the

CNSC approved this licence in August 2013. This supports the intention to operate the Pickering Units 5 to 8 to 2020. A regulatory hold point has been added to the licence related to fuel channels and the original end-of-life dates for Pickering Units 5 to 8. To satisfy the requirements for removal of the hold point, OPG must provide the results of additional safety assessments in a future proceeding with public participation, as required by the CNSC. Actions to clear the Pickering license hold point are being completed as planned.

In February 2013, the CNSC approved the renewal of the Darlington Nuclear GS licence for a period from March 1, 2013 to December 31, 2014. On December 13, 2013, OPG submitted an application for a licence renewal that will span the refurbishment period. The CNSC hearing is scheduled for 2014.

During 2013, generation and reliability at the nuclear stations were primarily affected by an increase in outage days at the Pickering and Darlington Nuclear generating stations. This is discussed under the heading, *Electricity Generation* and section *Highlights*, and under the heading *Regulated – Nuclear Generation Segment* and section *Discussion of Operating Results by Business Segment*.

#### Hydroelectric Generating Assets

The hydroelectric business segments are focused on producing electricity in a safe, reliable, cost-effective, and environmentally responsible manner.

These segments have the following objectives:

- sustain and improve the existing assets for long-term operations
- operate and maintain the facilities in an efficient and cost-effective manner
- seek to expand existing stations, where economic
- maintain and improve reliability performance, where practical and economic
- maintain an excellent employee safety record and ensure all worker safety laws are met
- strive for continuous improvement in the areas of dams and waterways, public safety, and environmental performance
- build and improve relationships with First Nations and Métis.

In consideration of current and future market conditions, OPG continues to evaluate and implement plans to increase capacity, maintain performance, and extend the operating life of its hydroelectric generating assets. This is expected to be accomplished through refurbishment or replacement of existing turbine runners, generators, transformers, and protections and controls. This includes increasing the capacity and efficiency at certain stations by approximately 44 MW over the next five years. OPG is also planning to repair, rehabilitate, or replace a number of aging civil structures in the next five years.

During 2013, OPG continued to execute a number of projects and completed major equipment overhauls and rehabilitation work at several stations. These include:

- completion of a refurbishment at Unit 3 of the Sir Adam Beck 1 GS that increased the unit's capacity from 46 MW to 55 MW
- completion of a turbine runner upgrade and generator overhaul at Unit 1 of the Des Joachims GS
- replacement of control and monitoring systems at 26 stations
- continued work on the rehabilitation of the concrete dam at Chats Falls GS.

The environmental performance of OPG's hydroelectric generating stations in 2013 was the best ever. There were minimal spills to the environment and several efficiency improvement initiatives were completed.

A Dam Safety Review Panel, comprised of internationally recognized experts, concluded that OPG's Dam and Public Safety Program meets international best practices in a number of areas related to maintaining safe dam operation.

OPG continues to develop a new risk-informed approach on behalf of the Ontario Ministry of Natural Resources (MNR) to prioritize and manage risks identified through the outcomes of dam safety assessments. This approach will result in significant benefits with respect to both safety and costs for future upgrades to existing infrastructure.

Employee and public safety continue to be a high priority. Safety programs are based on the best practice Health and Safety managed system process and engineering risk assessments of plant systems. Based on these systems and assessments, OPG is able to place a priority on investments in work planning, staff training, and at-risk equipment. These investments are designed to mitigate and eliminate health and safety and production issues at its stations.

As part of OPG's Business Transformation initiative, the operations of its hydroelectric and thermal assets in Northwestern Ontario are being combined into one organization, effective January 2014. This will reduce the number of senior managers, combine reporting and centre-led support functions, and create opportunities to more effectively utilize resources. This change is expected to result in increased efficiency and ongoing cost savings.

#### Thermal Generating Assets

OPG's thermal stations operate as peaking facilities, depending on electricity demand. The thermal units are able to start up and shut down through a wide range of their installed capacity. This ability provides Ontario's electricity system with the flexibility to meet changing daily system demand and capacity requirements, and enables the system to accommodate the expansion of Ontario's renewable generation portfolio.

During the first quarter of 2013, OPG and the IESO executed the Reliability Must Run contract for one unit at the Thunder Bay GS, for the period from January 1, 2013 to December 31, 2013. The contract was approved by the OEB in July 2013, and has provided additional revenue of approximately \$40 million during 2013.

OPG ceased operation of the remaining coal-fired units at the Lambton GS as of September 20, 2013 and at the Nanticoke GS as of December 31, 2013, in accordance with the declaration issued by the Minister of Energy in March 2013. OPG is placing the units in such a state to preserve the option to convert them to natural gas and/or biomass in the future, if required. OPG will seek recovery of ongoing costs to preserve the option to convert the units at a future date. Converted thermal generating stations can provide Ontario's electricity system with continued flexibility of daily start up and shut down, load-following capability to meet changing system needs, and complement non-dispatchable renewable energy sources.

In 2009, OPG entered into a Contingency Support Agreement with the OEFC to provide, following the implementation of CO<sub>2</sub> emissions targets/caps consistent with good utility practice, for OPG to be able to continue to maintain the stations for supply adequacy and system reliability by providing for OPG to receive sufficient revenue to recover the actual direct costs of the Lambton and Nanticoke generating stations, and to provide reimbursement of capital expenditures through the recapture of depreciation up to December 31, 2014. As a result of the Shareholder declaration issued in March 2013, mandating that OPG cease the use of coal at the Nanticoke GS and the Lambton GS by the end of 2013, in advance of the previous December 31, 2014 deadline, OPG and the OEFC executed an amendment to the Contingency Support Agreement. The amendment allows for early termination of the agreement and for OPG to recover actual costs that cannot reasonably be avoided or mitigated during the period from the advanced date up to the end of 2014. On November 1, 2013, the OEFC provided written notice that it would terminate the Contingency Support Agreement, effective December 31, 2013, thus triggering the amendment that allows OPG to recover these costs during 2014.

As a result of ceasing operation of the coal-fired units, OPG has estimated the restructuring costs, including costs related to severance and relocation to other OPG sites. During 2013, OPG accrued \$50 million of severance costs related to the unit closures at the Atikokan, Thunder Bay, Lambton, and Nanticoke generating stations. Relocation costs will be recorded as incurred, primarily in 2014. These costs, as they relate to the Lambton and Nanticoke generating stations, are not recoverable under the Contingency Support Agreement.

In 2014, OPG's coal-fired generation will be limited to minimal generation from one unit at the Thunder Bay GS, which will cease burning coal by December 31, 2014. Plans to convert one unit at the Thunder Bay GS to operate on advanced biomass have commenced, given the Shareholder directive issued to the OPA in December 2013. The converted unit is expected to have an in-service capacity of 150 MW.

In 2012, the Province announced the relocation of the Greenfield South gas-fired station development from Mississauga to a small portion of the Lambton GS site. In 2013, Greenfield South found a different location and allowed the option on the Lambton property to lapse.

Employee and public safety continue to be the thermal business segment's highest priority. Safety programs are based on the best practice Health and Safety managed system process and engineering risk assessments of plant systems. Based on these systems and assessments, OPG places a priority on investments in work planning, staff training, and at-risk equipment. These investments are designed to mitigate and eliminate health and safety and production issues at its stations.

#### Environmental Performance

OPG's Environmental Policy states that "OPG shall meet all legal requirements and any environmental commitments that it makes, with the objective of exceeding these legal requirements where it makes business sense." This policy commits OPG to:

- establish and maintain an environmental management system
- work to prevent or mitigate adverse effects on the environment with a long-term objective of continual improvement
- maintain, or where it makes business sense, enhance significant natural areas and associated species at risk.

Environmental performance targets also form part of OPG's annual business planning process. Performance is monitored and communicated to internal and external stakeholders.

OPG monitors emissions into the air and water and regularly reports the results to regulators, including Ontario's Ministry of the Environment, Environment Canada, and the CNSC. The public also receives ongoing communications regarding OPG's environmental performance. OPG has developed and implemented internal monitoring, assessment, and reporting programs to manage environmental risks. These risks include air and water emissions, discharges, spills, the treatment of radioactive emissions, and radioactive wastes. OPG also continues to address historical land contamination through a voluntary land assessment and remediation program.

In 2013, OPG managed air emissions of nitrogen oxides (NO<sub>x</sub>) and sulphur dioxide (SO<sub>2</sub>) through the use of specialized equipment such as scrubbers, low-NO<sub>x</sub> burners, Selective Catalytic Reduction equipment, and the purchase of low sulphur fuel. For the years ended December 31, CO<sub>2</sub> and acid gas (SO<sub>2</sub> and NO<sub>x</sub>) emissions from OPG's coal-fired stations were as follows:

	2013	2012
CO₂ <i>(million tonnes)</i>	3.2	4.3
SO₂ and NO <sub>x</sub> (gigagrams)	14.8	16.1

The decrease in CO<sub>2</sub> and acid gas emissions resulted from reduced coal-fired generation during 2013. As mandated by the Minister of Energy, the Nanticoke and Lambton generating stations ceased operation of the remaining coal-fired units in 2013. Forecast coal-fired generation for 2014 is expected to be limited to minimal generation from one coal-fired unit at the Thunder Bay GS.

OPG's environmental performance for 2013 met or outperformed targets for all spills, infractions, production of low and intermediate level radiological waste, air emissions (tritium, carbon-14, CO<sub>2</sub>, and acid gas), and water emissions

(tritium). In 2013, OPG replaced multiple environmental management systems in place across the Company with one new corporate-wide environmental management system (EMS). Following the completion of a successful audit of the single OPG-wide EMS in 2013, OPG achieved recommendation for ISO 14001 registration of the EMS.

Starting July 1, 2015, the federal government's *Reduction of Carbon Dioxide from Coal-fired Generation of Electricity Regulations* will impose a yearly emission intensity limit of 420 megagrams (Mg) CO<sub>2</sub>/GWh for coal-fired units that have reached the end of their useful life. This regulation is not expected to impact OPG as a result of ceasing generation using coal at the Nanticoke and Lambton generating stations. It is also not expected to impair OPG's ability to convert coal units to burn biomass or natural gas.

In January 2013, the Ontario Ministry of the Environment released a discussion paper entitled Greenhouse Gas Emission Reductions in Ontario. The discussion paper initiated consultation on key elements of a provincial greenhouse gas (GHG) emission reduction plan. OPG provided comments on the discussion paper to the Ministry of the Environment in April 2013. Current provincial regulations require facilities that emit 25,000 Mg or more of CO<sub>2</sub>-equivalent emissions to monitor, measure, and report emissions. OPG will comply with the requirements. The Company will also continue to monitor developments of the provincial GHG emission reduction plan. To further reduce GHG emissions, OPG is implementing the use of biofuels.

#### <u>Safety</u>

OPG is committed to achieving excellent safety performance and striving for continuous improvement with the ultimate goal of zero injuries. Safety performance is measured using two primary indicators:

- Accident Severity Rate (ASR)
- All Injury Rate (AIR).

Overall, OPG's safety performance is consistently one of the best amongst its comparator Canadian electrical utilities. In November 2013, the Canadian Electricity Association recognized OPG for ranking within the top quartile of its comparator group in 2012.

	2013	2012
AIR (injuries per 200,000 hours worked)	0.61	0.63
ASR (days lost per 200,000 hours)	0.94	2.40

Based on strong safety performance in 2013, it is expected that OPG will continue to be one of the best amongst its comparator Canadian electrical utilities.

OPG remains steadfast in its commitment to safety excellence, sustaining a strong safety culture and continuous improvement in safety management systems. In 2013, OPG completed the development work on an integrated health and safety management system and operational risk control procedures. This initiative is in alignment with OPG's Business Transformation objective. The initiative was achieved through leveraging best practices across OPG, streamlining safety governance, and standardizing safety requirements across the corporation.

OPG's contractors are also expected to maintain a level of safety equivalent to that of OPG's employees. In 2013, OPG retained the services of a third party service provider to strengthen the rigour of the evaluation of contractor's safety programs before they are considered eligible to work on OPG sites.

#### **Project Excellence**

OPG is pursuing several generation development projects. OPG's major projects include Darlington refurbishment, new hydroelectric generation and plant expansions, and the potential conversion of coal-fired generating units to alternative fuels.

Project	Cap expend		Approved budget	Planned in-service	
(millions of dollars)	Year-to-date	Life-to-date	-	date	
Darlington Refurbishment	431	793			A detailed cost and schedule estimate for the refurbishment of the four units is expected to be completed in 2015. See update below.
Niagara Tunnel	87	1,459	1,600	December 2013	Completed and declared in-service in March 2013 below the approved budget and ahead of the approved project completion date.
Lower Mattagami	629	1,982	2,600	June 2015	First incremental unit was placed in- service in January 2014. Project is on budget and on schedule. See update below.
Deep Geologic Repository for Low and Intermediate Level Waste <sup>1</sup>	21 <sup>1</sup>	167 <sup>1</sup>			The public review period for the Environmental Assessment (EA) approval and a site preparation and construction licence ended in May 2013. The public hearing for the EA and the licence took place during the second half of 2013. Design activities are suspended pending a licence from the Joint Review Panel (JRP).
Atikokan Biomass Conversion	85	144	170	August 2014	Construction continues. Project is on budget and on schedule. See update below.

<sup>1</sup> Expenditures are funded by the nuclear fixed asset removal and nuclear waste management liabilities.

#### Darlington Refurbishment

The Darlington generating units, based on original design assumptions, are currently forecast to reach their end of life between 2019 and 2020. The objective of the refurbishment is to extend the operating life of the station by approximately 30 years. In 2010, OPG announced its decision to begin the definition phase for the project. Activities in this phase include the establishment of the project organization, scope finalization, engineering, planning and estimating, procurement of long lead items, establishment of key contracts, and facilities and infrastructure upgrades. Refurbishment of the four Darlington units is currently estimated to cost less than \$10 billion in 2013 dollars, excluding capitalized interest and escalation. The project is currently estimated to be completed by 2025. A detailed cost and schedule estimate for the refurbishment of the four units is expected to be completed in 2015. In 2016, the first unit outage will commence and OPG will start execution of the refurbishment scope on that unit. The CNSC has set out regulatory requirements for Life Extension of Nuclear Power Plants. In line with these requirements, OPG must complete a series of assessments for the Darlington refurbishment project. Key milestones include the following:

- in March 2013, following public hearings in 2012, the CNSC issued a decision on the EA for the refurbishment of the Darlington Nuclear GS, confirming that, taking into account the identified mitigation measures, Darlington refurbishment and continued operations are not likely to cause significant environmental effect
- in April 2013, the EA was subsequently challenged by way of judicial review in the Federal Court of Canada, on the grounds that the EA failed to comply with requirements of the *Canadian Environmental Assessment Act*, and that the hearing deprived the applicants certain procedural rights. A hearing is expected to be scheduled in 2014
- in July 2013, OPG received the CNSC's staff assessment of the Integrated Safety Review (ISR), which confirmed that the ISR meets applicable regulatory requirements
- in December 2013, OPG submitted the Global Assessment Report and Integrated Implementation Plan, which incorporate the significant EA and ISR results.

As of December 31, 2013, OPG has issued contracts valued at approximately \$1.5 billion related to the refurbishment of the Darlington nuclear station. These contracts contain suspension and termination provisions. The most significant contracts include the Retube and Feeder Replacement contract, and the Turbine Generator contract. The Retube and Feeder Replacement contract was signed in 2012 with a joint venture of SNC-Lavalin Nuclear Inc. and Aecon Construction Group Inc. In March 2013, OPG awarded a Turbine Generator contract for equipment supply and technical services to Alstom Power and Transport Canada Incorporated. The contract is valued at approximately \$350 million.

OPG signed a contract for the primary and secondary side cleaning of the Steam Generators in December 2013. The contract for the engineering integration and field installation portion of the Turbine Generator scope of work was signed in February 2014.

OPG is now progressing with the design and construction of facilities and infrastructure projects required at the Darlington site for the refurbishment and continued operation of the station. This includes the construction of water and sewer upgrades, modifications to site electrical system, construction of project and contractor facilities, as well as the addition of heavy water storage capacity.

The Darlington Energy Complex (Complex) was placed in-service in June 2013. The Complex will house a training and reactor mock-up facility, warehouse, and office space to support the Darlington Refurbishment project. In May 2013, construction of the full-scale reactor mock-up facility began. The mock-up facility and development of specialized tooling are both integral to OPG's strategy to ensure certainty in scope, schedule and project cost. The mock-up facility was completed during the first quarter of 2014 ahead of schedule; the mock-up facility is now being prepared for tool testing and training. Retube and feeder replacement tooling design and fabrication is progressing in parallel with mock-up facility construction, and remains on track for completion in 2015.

All prerequisite facility and infrastructure projects are expected to be completed prior to the start of the first unit's refurbishment in the fourth quarter of 2016.

#### New Nuclear Units

In the 2013 Long-Term Energy Plan, the Government of Ontario indicated that it will not proceed at this time with the construction of two new nuclear reactors at the Darlington site. However, the Ministry of Energy will work with OPG to maintain the site preparation licence granted by the CNSC. As such, OPG is undertaking activities required to support the EA and existing licence.

In 2012, the Power Reactor Site Preparation Licence and Darlington New Nuclear Project EA were challenged by way of judicial review. The judicial review hearing was held in November 2013. A decision is expected in 2014.

In 2012, OPG entered into service agreements with Westinghouse and SNC Lavalin/CANDU Energy to prepare construction plans, schedules, and cost estimates for potential new nuclear units at Darlington. Submissions from the two vendors were provided to a review team consisting of representatives from OPG, the Ministry of Energy, the Ministry of Finance, and Infrastructure Ontario in June 2013. The preliminary results of the submission assessment were subsequently provided to the Ministry of Energy in September 2013 and the final results in November 2013.

#### Niagara Tunnel

In March 2013, the 10.2 kilometre Niagara Tunnel was declared in-service, approximately nine months ahead of the approved project completion date of December 2013. The tunnel provides an additional water diversion capacity of approximately 500 cubic metres per second and will increase annual generation from the Sir Adam Beck GS by an average of approximately 1.5 TWh, depending on water flow. Total costs of the project after closure activities are expected to be below \$1.5 billion, compared to the approved budget of \$1.6 billion.

#### Lower Mattagami

The Lower Mattagami River project will increase the capacity of the four generating stations on the Lower Mattagami River by 438 MW. The project is expected to be completed on schedule by June 2015, and within the approved budget of \$2.6 billion.

The 67 MW incremental unit at the Little Long GS was declared in-service on January 19, 2014, ahead of its original target completion date of February 2014. This is the first incremental unit to be completed on the Lower Mattagami River project.

At the Harmon site, construction was substantially completed during the fourth quarter of 2013 and the commissioning process has commenced. The 78 MW incremental unit at the Harmon GS is expected to be declared in-service during the second quarter of 2014.

In December 2012, there was a breach in one section of the installed cofferdam at the Kipling site. OPG finalized and successfully executed a remediation plan regarding the breach and construction resumed at the site in May 2013. Construction continues at the Smoky Falls and Kipling sites, with commissioning operations expected to commence at both sites during the latter half of 2014.

#### Deep Geologic Repository for Low and Intermediate Level Waste

In 2010, OPG approved the start of the detailed design phase of the Deep Geologic Repository (DGR) project for the long-term management of low and intermediate level waste (L&ILW). The L&ILW DGR will be designed to manage L&ILW produced from the continued operations of OPG owned nuclear generating stations.

The public hearing for the EA and the site preparation and construction licence was held during the second half of 2013. OPG made a number of presentations to the JRP and responded to a number of inquiries coming from the JRP. This included questions and motions arising from the public's participation. Following the public hearing, OPG received additional information requests. These are required to be addressed prior to the close of the public hearing record for the proceeding. OPG expects to provide the JRP with responses during the first half of 2014. The JRP is expected to provide a report and recommendation on the EA to the federal Minister of Environment within 90 days of the close of the public hearing record. A decision from the Minister of Environment is expected within 120 days from the submission of the report.

OPG has suspended design activities pending receipt of the site preparation and construction licence from the JRP which is expected in the first half of 2015. Upon completion of the detailed design, development of a release quality

estimate, and ongoing consultation with the Saugeen Ojibway Nations community, OPG will proceed with construction. The in-service date of the DGR will be approximately six to seven years from the start of construction.

#### Atikokan Conversion

OPG is in the process of converting the Atikokan GS from coal to biomass fuel. The converted station is expected to have a capacity of 200 MW. During 2013, construction of two storage silos was completed. In addition, all 15 redesigned burners were installed and commissioning of the combustion systems began. The conversion project has an approved budget of \$170 million, and is expected to be completed by August 2014. OPG and the OPA executed the Atikokan Biomass ESA in 2012.

#### New Post Creek

In June 2013, the Minister of Energy directed the OPA to negotiate a power purchase agreement for the proposed 25 MW New Post Creek hydroelectric GS. The public review period for the EA closed in January 2014. OPG and its partner, Coral Rapids Power L.P., are in the process of addressing the comments received during the review period to complete the EA process.

#### **Financial Sustainability**

As a commercial enterprise, OPG's financial priority is to consistently achieve a level of financial performance that will ensure its long-term financial sustainability and maintain the value of its assets for its Shareholder – the Province of Ontario. Inherent in this priority are three objectives:

- enhancing profitability by increasing revenue
- improving efficiency and reducing costs
- ensuring a strong financial position that enhances OPG's ability to continue to finance its operations and generation development projects.

#### Revenue Growth

OPG's revenue strategy focuses on revenue growth, while taking into account the impact on Ontario electricity ratepayers. Currently, OPG has multiple sources of revenue, including:

- regulated revenue from nuclear and most baseload hydroelectric generating facilities
- unregulated revenue based on electricity spot market prices for production from certain unregulated hydroelectric facilities
- contract revenue from ESAs and cost recovery agreements for the remaining unregulated facilities
- non-generation revenues.

Electricity produced from the prescribed facilities receives regulated prices. OPG's objectives are to clearly demonstrate that costs for its regulated operations are prudently incurred and should be fully recovered, and to earn an appropriate return on its regulated assets. The OEB's decision on OPG's application for new regulated prices effective March 1, 2011 established significantly lower regulated prices than submitted by OPG. As such, current regulated prices authorized by the OEB do not allow these operations to earn the rate of return on the regulated assets as requested. This negatively impacts OPG's financial performance. For OPG to generate what it believes to be an acceptable return on its assets and future investments, maintain its credit rating and continue to contribute positively to the Province's financial position, an increase in regulated prices is required.

In the first quarter of 2013, the OEB approved a Settlement Agreement on OPG's September 2012 application that allows OPG to recover \$633 million over the 2013/2014 period. This amount is related to balances in the authorized regulatory variance and deferral accounts as at December 31, 2012. The remaining approved balances in the variance and deferral accounts as at December 31, 2012 are expected to be recovered over a number of years. The additional revenue from the rate riders resulting from the approved settlement reflects the collection of balances

related to prior periods. In September 2013, OPG filed an application with the OEB for new regulated prices effective in 2014.

A portion of OPG's electricity production is unregulated and sold at the Ontario electricity spot market price. Despite the increase in average spot market price in 2013, compared to 2012, unregulated revenues remain insufficient to fully recover costs and earn an appropriate return. OPG has negotiated ESAs and cost recovery agreements for some of its unregulated hydroelectric and thermal assets.

In November 2013, *Ontario Regulation 53/05* was amended. The amendment requires OPG's 48 currently unregulated hydroelectric stations that are not under an ESA to be prescribed for rate regulation by the OEB, effective July 1, 2014. In its September 2013 OEB application, OPG submitted proposed regulated prices for the newly regulated hydroelectric facilities. These prices would allow OPG to recover its costs for these facilities while earning an appropriate return on these assets.

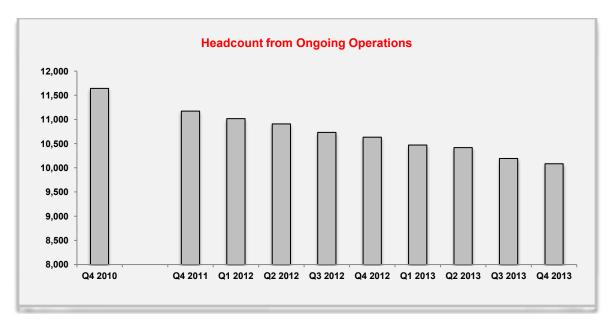
OPG also earns non-electricity generation revenues through a number of sources, including: isotope and heavy water sales; the lease of the Bruce A and B nuclear stations; joint ventures associated with the PEC and the Brighton Beach gas-fired combined cycle generating stations; trading and other non-hedging activities; real estate rentals and sales; and the provision of technical and engineering services to third parties. The benefit of OPG's net revenues from the lease of the Bruce stations and related agreements is credited to ratepayers, as the net revenues reduce the regulated prices of the generation of the nuclear facilities owned and operated by OPG.

To increase non-generation revenues, OPG, through its wholly-owned subsidiary, Canadian Nuclear Partners Inc. (CNP), is exploring opportunities to provide management and technical services to other utilities and power sector organizations. These services are based on CNP's ability to leverage expertise in safety, reliability, and cost effective maintenance and operations of generating assets. CNP will deliver these services, either independently or in collaboration with others in the industry.

#### Improving Efficiency and Reducing Costs

OPG is aggressively pursuing efficiency and productivity improvements while reducing costs. To accomplish this, in 2011 OPG launched a multi-year Business Transformation initiative to create a streamlined company with a sustainable cost structure. To operate within this streamlined structure, OPG has moved to a centre-led model to use resources more efficiently. Each business unit has launched initiatives to improve efficiencies and reduce work through process streamlining. These initiatives are expected to drive sustainable change, while ensuring that changes do not impact the safety, reliability and environmental sustainability of OPG's operations.

OPG expects to use attrition to reduce its year-end 2016 headcount from ongoing operations by approximately 2,330 employees from the 2011 level. This reduction is expected to result in significantly lower OM&A expenses. During the 2011 to 2013 period, OPG's headcount from ongoing operations has been reduced by 1,600, primarily through attrition. The reduction in headcount has already saved OPG approximately \$275 million as of the end of 2013.



#### Strengthening Financial Position

In addition to its initiatives to increase revenue, achieve efficiencies, and reduce costs, OPG also employs the following four strategies to strengthen its financial position:

- Ensuring sufficient liquidity: OPG's primary sources of liquidity and capital include funds generated from operations, bank financing, credit facilities provided by the OEFC, and capital market financing. Cash flow provided by operating activities increased by \$298 million in 2013. In 2013, OPG renewed and extended its \$1 billion bank credit facility to May 2018, and entered into an agreement with the OEFC for a \$500 million general corporate credit facility that expires on December 31, 2014. In 2013, OPG accessed the debt markets through private placements of \$475 million in support of the Lower Mattagami River project. OPG intends to continue to access the capital markets, where appropriate, to obtain cost effective financing for future generation development projects.
- Maintaining an investment grade credit rating: OPG's current investment grade credit ratings have enabled it to secure financing at cost effective interest rates. In February 2013, Standard & Poor's affirmed OPG's commercial paper rating at A-1 (low), and long-term credit rating at A- with a negative outlook. In February 2014, Standard & Poor's reaffirmed OPG's long-term credit rating at A- with a negative outlook. In March 2013, Dominion Bond Rating Service (DBRS) re-affirmed the long-term credit rating on OPG's debt at A (low), and the commercial paper rating at R-1 (low). All ratings from DBRS have a stable outlook.
- Ensuring that generation development projects are economic and provide for cost recovery and an appropriate return: OPG evaluates generation development opportunities based on detailed financial and risk based analysis. Project funds are committed to and released in stages based on specific milestones and taking into consideration the nature and risk of the project. For generation development projects that are not regulated by the OEB, OPG seeks to secure appropriate revenue arrangements prior to project approval. For generation development projects subject to OEB rate regulation, OPG strives to demonstrate to the OEB that its investment plans and expenditures are prudent.
- Evaluating financial performance: OPG continuously evaluates its financial performance using key credit rating and financial metrics, including ROE, and FFO Interest Coverage. For further details, refer to the ROE and FFO Interest Coverage disclosure under the heading, *Supplementary Non-GAAP Financial Measures*.

## CAPABILITY TO DELIVER RESULTS

OPG's capabilities to execute its corporate strategies and deliver results are impacted by a number of areas.

#### **Generating Assets' Reliability**

OPG continues to implement specific initiatives to improve the reliability and predictability of each nuclear generating station that it operates. These initiatives are designed to address specific technology requirements, operational experience, and mitigate risks. The Darlington Nuclear GS has converted to a three-year outage cycle to take advantage of the physical condition of the plant, the availability of backup systems, and on-power refuelling. The Pickering Nuclear generating stations will continue to focus on implementing targeted reliability improvements.

OPG has increased the productive capacity of its hydroelectric stations and has made significant capital investments to replace aging equipment, upgrade turbine runners, increase station automation, and enhance maintenance practices. Programs are in place to further improve the efficiency and availability of existing hydroelectric stations.

#### **Project Planning and Execution**

OPG is pursuing and executing a number of generation development opportunities as described under the heading, *Core Business and Strategy*. OPG also continues to plan and execute maintenance and capital improvement projects related to its existing assets. To achieve its strategy of project excellence, OPG must use the necessary talent and experience to efficiently plan and execute projects on time and on budget. The project planning and preparation process includes establishing contingency plans to manage potential challenges, creating and maintaining comprehensive risk registers, and tracking progress against clearly established milestones. In addition, project accountability is established at the appropriate level, with oversight by senior management and Board Committees.

#### **Operating Efficiencies**

OPG is continuing to focus on cost reductions and efficiencies through its Business Transformation initiative. Progress is being achieved through a restructuring of the Company that has combined the hydroelectric and thermal operations, restructured commercial operations to take advantage of market opportunities, and implemented a scalable, centre-led service delivery model for business support functions. The Company has simplified its operational and project work processes to further streamline operations.

This significant transformation requires a strong leadership team and change agents who can achieve the necessary culture change and efficiencies, while continuing to operate OPG's generating assets in a safe and reliable manner.

#### **People and Culture**

OPG expects to meet the human resource needs of the business by leveraging attrition through realigning work and streamlining processes. OPG is also focusing on the communication and implementation of OPG's values and expected behaviours from its employees in order to bring about a corporate culture change.

While balancing the need to leverage attrition, OPG continues to focus on improving the capability of its workforce through succession planning, leadership development, and knowledge retention programs. OPG expects to develop and acquire talent as needed to continue to drive change and build leadership bench strength. The Company has an active succession planning program and continues to implement leadership development programs across the organization. In addition, OPG has embarked upon an organization-wide workforce planning effort. The Company has also established monitoring processes to re-assess risks, issues and opportunities related to staffing on a regular basis.

Electricity generation involves complex technologies. These in turn demand highly skilled and trained workers. Many positions at OPG have significant educational prerequisites. They also have rigorous requirements for continuing training and periodic requalification. In addition to maintaining its extensive internal training infrastructure, OPG relies on partnerships with government agencies, other electrical industry partners, and educational institutions to meet the required level of qualification.

As of December 31, 2013, OPG had approximately 10,270 full-time employees and approximately 800 seasonal, casual construction, contract, and non-regular staff. Most of OPG's full-time employees are represented by two unions:

- **The Power Workers' Union (PWU)** This union represents approximately 6,000 OPG employees. The current collective agreement between OPG and the PWU has a three-year term, which expires on March 31, 2015
- The Society of Energy Professionals (The Society) This union represents approximately 3,200 OPG employees. The Company's most recent collective agreement with The Society was established through an arbitration award issued on April 8, 2013. This collective agreement has a three-year term, which expires on December 31, 2015. The Society filed a Judicial Review Application in the second quarter of 2013 to the Superior Court of Ontario in the matter of the arbitration award. The case is expected to be heard in late 2014. The Society represents 31 percent of OPG's regular workforce. Union membership includes supervisors, professional engineers, scientists, and professionals.

In addition to the regular workforce, construction work is performed through 20 craft unions with established bargaining rights on OPG facilities. These bargaining rights are either through the Electrical Power Systems Construction Association (EPSCA) or directly with OPG. Collective agreements between the Company and its construction unions are negotiated either directly or through EPSCA. A common expiry date for a number of the EPSCA agreements is April 30, 2015.

## **BUSINESS SEGMENTS**

For the year ended December 31, 2013, OPG has five reportable business segments:

- Regulated Nuclear Generation
- Regulated Nuclear Waste Management
- Regulated Hydroelectric
- Unregulated Hydroelectric
- Unregulated Thermal.

## **Regulated – Nuclear Generation Segment**

OPG's Regulated – Nuclear Generation business segment operates in Ontario, generating and selling electricity from the nuclear generating stations that it owns and operates. The business segment includes electricity generated by the Pickering and Darlington Nuclear generating stations. This business segment also includes revenue under the terms of a lease arrangement and related agreements with Bruce Power related to the Bruce Nuclear generating stations. This revenue includes lease revenue and revenue from services such as heavy water sales and detribution. Revenue is also earned from isotope sales and ancillary services. Ancillary revenues are earned through voltage control and reactive support. Revenues under the agreements with Bruce Power and from isotope sales and ancillary services are included by the OEB in the determination of the regulated prices for OPG's nuclear facilities.

## **Regulated – Nuclear Waste Management Segment**

OPG's Regulated – Nuclear Waste Management segment engages in the management of nuclear used fuel and L&ILW, the decommissioning of OPG's nuclear generating stations (including the stations on lease to Bruce Power),

the management of the Nuclear Funds, and related activities including the inspection and maintenance of the waste storage facilities. Accordingly, accretion expense, which is the increase in the carrying amount of the Nuclear Liabilities due to the passage of time, and earnings from the Nuclear Funds are reported under this segment.

As the nuclear generating stations operate over time, OPG incurs variable costs related to nuclear used fuel bundles and L&ILW generated. These costs increase the Nuclear Liabilities through the generation of additional used nuclear fuel bundles and L&ILW. OPG charges these variable costs to current operations in the Regulated – Nuclear Generation segment to reflect the cost of producing energy and earning revenue under the Bruce Power lease arrangement and related agreements. Since variable costs increase the Nuclear Liabilities in the Regulated – Nuclear Waste Management segment, OPG records an inter-segment charge between the Regulated – Nuclear Generation and the Regulated – Nuclear Waste Management segment, or of the inter-segment charge is eliminated on OPG's consolidated statements of income and balance sheets.

The Regulated – Nuclear Waste Management segment is considered regulated because the costs associated with the Nuclear Liabilities are included by the OEB in the determination of regulated prices for production from OPG's regulated nuclear facilities.

## **Regulated – Hydroelectric Segment**

OPG's Regulated – Hydroelectric business segment operates in Ontario, generating and selling electricity from most of the Company's baseload hydroelectric generating stations. The business segment is comprised of electricity generated by the Sir Adam Beck 1, 2 and Pump GS, DeCew Falls 1 and 2, and the R.H. Saunders hydroelectric facilities. Ancillary revenues and other revenues are earned through offering available generating capacity as operating reserve and through the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services. These ancillary revenues and other revenues are included by the OEB in the determination of the regulated prices for these facilities.

#### **Unregulated – Hydroelectric Segment**

The Unregulated – Hydroelectric business segment operates in Ontario, generating and selling electricity from the Company's hydroelectric generating stations, which are not currently subject to rate regulation. The segment includes hydroelectric stations that are subject to ESAs. Ancillary revenues and other revenues are earned through offering available generating capacity as operating reserve, and the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services.

## **Unregulated – Thermal Segment**

The Unregulated – Thermal business segment operates in Ontario, generating and selling electricity from the Company's thermal generating stations, which are not subject to rate regulation. Ancillary revenues are earned through offering available generating capacity as operating reserve, and the supply of other ancillary services including voltage control and reactive support, regulation service, and other services.

## Other

The Other category includes revenue that OPG earns from its 50 percent joint venture share of Brighton Beach related to an energy conversion agreement between Brighton Beach and Shell Energy North America (Canada) Inc. This category also includes revenue that OPG earns from its 50 percent joint venture share of the PEC gas-fired generating station, which is operated under the terms of an Accelerated Clean Energy Supply contract with the OPA. The revenue and expenses related to OPG's trading and other non-hedging activities are also reported in the Other category. As part of these activities, OPG transacts with counterparties in Ontario and neighbouring energy markets in predominantly short-term trading activities of typically one year or less in duration. These activities relate primarily to physical energy that is purchased and sold at the Ontario border, sales of financial risk management products and sales of energy-related products. All contracts that are not designated as hedges are recorded as assets or liabilities

at fair value, with changes in fair value recorded in the revenue of the Other category. In addition, the Other category includes revenue from real estate rentals and other service revenues.

#### **2014 New Business Segments**

Effective January 1, 2014, given the change in OPG's generation portfolio, as discussed under the heading, *OPG's Reporting Structure*, OPG has revised its reportable business segments such that electricity generating facilities with similar revenue mechanisms and risk profiles will be reflected in separate segments.

OPG's reportable business segments, effective January 1, 2014 are: Regulated – Nuclear Generation, Regulated – Nuclear Waste Management, Regulated Hydroelectric, Contracted Generation Portfolio, and Services, Trading, and other Non-Generation. OPG's Regulated – Nuclear Generation and Regulated – Nuclear Waste Management segments are unchanged. The Regulated – Hydroelectric segment will continue to include the results of Sir Adam Beck 1, 2 and Pump GS, DeCew Falls 1 and 2, and the R.H. Saunders hydroelectric facilities and will also include the results of the 48 hydroelectric stations, which have been prescribed under amended *Ontario Regulation 53/05*, effective July 1, 2014. The Contracted Generation Portfolio segment will include the results of generating facilities that are under an ESA with the OPA or other long-term generation contracts. The Contracted Generation Portfolio segment will also include OPG's share of in-service generating capacity and equity income from its 50 percent ownership interest in PEC and Brighton Beach. The Services, Trading, and other Non-Generation segment will include revenue and expenses related to OPG's trading and other non-generation activities.

## **KEY GENERATION AND FINANCIAL PERFORMANCE INDICATORS**

Key performance indicators that directly pertain to OPG's mandate and corporate strategies are measures of production efficiency, cost-effectiveness, environmental and safety performance. OPG evaluates the performance of its generating stations using a number of key performance indicators. The measures used vary depending on the generating technology.

## **Nuclear Unit Capability Factor**

OPG's nuclear stations are baseload facilities. They have low marginal costs and are not designed for fluctuating production levels to meet peaking demand. The nuclear unit capability factor is a key measure of nuclear station performance. It measures the amount of energy that the unit(s) generated over a period of time, adjusted for externally imposed constraints, such as transmission or demand limitations, as a percentage of the amount of energy that would have been produced over the same period had the unit(s) produced maximum generation. Capability factors are primarily affected by planned and unplanned outages. Capability factors, by industry definition, exclude production losses beyond plant management's control, such as grid-related unavailability.

#### **Hydroelectric Availability**

OPG's hydroelectric stations operate as baseload, intermediate, and peaking stations. They provide a safe, reliable and low-cost source of renewable energy. Hydroelectric availability is a measure of the reliability of a hydroelectric generating unit. It is represented by the percentage of time the generating unit is capable of providing service, whether or not it is actually in-service, compared to the total time for a respective period.

#### **Thermal Start Guarantee Rate**

OPG's thermal stations provide a flexible source of energy. They operate as peaking facilities, depending on the demand of the market. Given continued changes in the electricity market in Ontario, the main focus of the thermal business is to ensure its generating units are available when needed. Beginning in 2012, OPG adopted the Start Guarantee rate as a key thermal reliability measure. The Start Guarantee rate represents the ratio of the number of times thermal units successfully start compared to the number of starts requested by the IESO.

## Thermal and Hydroelectric Equivalent Forced Outage Rate (EFOR)

A measure of the reliability of the thermal and hydroelectric generating stations is the proportion of time they are available to produce electricity when required. EFOR is an index of the reliability of the generating unit. It is measured by the ratio of time a generating unit is forced out of service by unplanned events, including any forced deratings, compared to the amount of time the generating unit was available to operate.

#### Nuclear Production Unit Energy Cost (PUEC)

Nuclear PUEC is used to measure the cost-effectiveness of the operations-related costs of production from OPG's nuclear generating assets. Nuclear PUEC is defined as the total cost of nuclear fuel, OM&A expenses including allocated corporate costs and the variable costs for the disposal of L&ILW, and variable costs related to used fuel disposal and storage, divided by nuclear electricity generation.

## Hydroelectric OM&A Expense per Megawatt hours (MWh)

Hydroelectric OM&A expense per MWh is used to measure the cost-effectiveness of hydroelectric generating stations. It is defined as total hydroelectric OM&A expenses, including allocated corporate costs, divided by hydroelectric electricity generation. It excludes expenses related to past grievances by First Nations.

#### Thermal OM&A Expense per MW

Thermal generating stations are primarily employed during periods of peak demand. Their cost-effectiveness of these stations is measured by their OM&A expenses for the year, including allocated corporate costs, divided by the weighted average station adjusted capacity.

#### **Return on Equity**

ROE is an indicator of OPG's performance consistent with its objectives to operate on a financially sustainable basis and to maintain the value for the Shareholder. ROE is defined as net income divided by average shareholder's equity excluding AOCI. More details are available under the headings, *Highlights – Return on Equity* and *Supplementary Non-GAAP Financial Measures* sections.

#### **Funds from Operations Interest Coverage**

FFO Interest Coverage is an indicator of OPG's ability to meet interest obligations from operating cash flows. FFO Interest Coverage is defined as FFO Before Interest, divided by Adjusted Interest Expense. It is measured over a period of twelve months. More details are available under the headings, *Highlights – Funds from Operations Interest Coverage* and *Supplementary Non-GAAP Financial Measures – FFO Interest Coverage* sections.

ROE and FFO Interest Coverage are not measurements in accordance with US GAAP. They should not be considered as alternative measures to net income or any other measure of performance under US GAAP. However, OPG believes that these non-GAAP financial measures are effective indicators of its performance and are consistent with the objectives to operate on a financially sustainable basis and to maintain the value for the Shareholder.

## **Other Key Indicators**

In addition to performance and cost-effectiveness indicators, OPG has identified certain environmental and safety metrics. These metrics are discussed under the heading, *Core Business and Strategy*.

# DISCUSSION OF OPERATING RESULTS BY BUSINESS SEGMENT

#### **Regulated – Nuclear Generation Segment**

(millions of dollars)	2013	2012
Regulated generation sales	2,552	2.719
Variance accounts	55	300
Other	287	41
Total revenue	2,894	3,060
Fuel expense	296	310
Variance and deferral accounts	(59)	(49)
Total fuel expense	237	261
Gross margin	2,657	2,799
Operations, maintenance and administration	2,022	1,930
Depreciation and amortization	626	480
Property and capital taxes	29	26
(Loss) income before other income, interest and income taxes	(20)	363
Other income	<b>`(1</b> )	(1)
(Loss) income before interest and income taxes	(19)	364

Loss before interest and income taxes from the segment was \$19 million in 2013, compared to income before interest and income taxes of \$364 million in 2012. The lower earnings of \$383 million was mainly due to lower generation of 4.3 TWh and an increase in OM&A expenses. In addition, earnings were also affected by lower revenue due to lower isotope sales and a decrease in technical services provided to third parties.

Extensions to planned outages at the Pickering and Darlington Nuclear generating stations in 2013 were the main driver for the lower generation. A second planned outage at the Darlington Nuclear GS and other unplanned outages during 2013 also contributed to lower generation. The impact of these outages was partially offset by the impact of a deferral of a fourth quarter 2013 planned outage at the Pickering Nuclear GS to the first quarter of 2014.

The increase in OM&A expenses in 2013 of \$92 million was primarily due to the following factors:

- an increase in outage activities during 2013
- a one-time reduction in OPEB expenses during 2012 resulting from the recognition of a regulatory asset for the Impact for USGAAP Deferral Account, partially offset by
- the impact of reduced headcount as a result of Business Transformation.

The 2013 generation revenue reflected the impact of the new rate riders for nuclear generation effective January 1, 2013 of \$88 million. The rate riders were established to collect amounts previously recorded in variance and deferral accounts, net of a refund to ratepayers for a portion of the benefit related to lower depreciation expense for the Pickering Nuclear GS in 2013 and 2014. Further, OPG recorded a regulatory asset and corresponding revenue of \$40 million representing amounts recorded in a variance account for under collection of balances due to the decrease in generation in 2013. The increase in revenue was offset by higher amortization expense related to the regulatory variance and deferral accounts.

The depreciation and amortization expenses also reflected the lower depreciation expense of \$39 million due to the impact of changes in station lives at the Pickering Nuclear GS, effective December 31, 2012. The decrease in depreciation expense was primarily related to the non-asset retirement cost component of the Pickering Nuclear GS. The lower depreciation expense related to asset retirement costs was offset by the impact of the Nuclear Liability Deferral Account.

During 2013, OPG recognized a \$33 million reduction in other revenue related to the Bruce Power lease agreement (Bruce Lease). This reduction was due to a change in the value of the derivative embedded in the Bruce Lease resulting from a decrease in the expected future annual arithmetic average HOEP (Average HOEP). The decrease in

lease revenue was offset by the increase in a regulatory asset for the Bruce Lease Net Revenues Variance Account. For more details, refer to the discussion under the heading, *Leases and Partnerships*.

The unit capability factors for the Darlington and Pickering Nuclear generating stations, and the PUEC for 2013 and 2012 are as follows:

(millions of dollars)	2013	2012
Unit Canability Easter (%)		
Unit Capability Factor (%) Darlington Nuclear GS	82.9	93.2
Pickering Nuclear GS	73.7	77.8
Nuclear PUEC (\$/MWh)	49.43	43.71

The lower capability factor at the Darlington Nuclear GS for 2013 was mainly due to a second planned outage and extensions to outages during 2013. Extensions to planned outages were the main reason for the decrease in capability factor at the Pickering Nuclear GS in 2013. The decrease in capability factor at the Pickering Nuclear GS was partially offset by a deferral of a planned outage from the fourth quarter of 2013 to the first quarter of 2014.

Lower generation and higher OM&A expenses resulted in an increase in nuclear PUEC in 2013.

# **Regulated – Nuclear Waste Management Segment**

(millions of dollars)	2013	2012
Revenue	113	107
Operations, maintenance and administration Accretion on nuclear fixed asset removal and nuclear waste management liabilities	121 742	114 712
Earnings on nuclear fixed asset removal and nuclear waste management funds	(628)	(651)
Loss before interest and income taxes	(122)	(68)

Loss before interest and income taxes for the Regulated – Nuclear Waste Management segment was \$122 million for 2013, compared to \$68 million for 2012. Higher accretion expense and lower earnings from the Decommissioning Segregated Fund (Decommissioning Fund) contributed to the higher segmented loss in 2013.

The lower earnings from the Decommissioning Fund were due to its overfunded status. When the Decommissioning Fund is overfunded, as it was for all of 2013, OPG is required to limit the earnings recognized at 5.15 percent to match the discount factor used to determine the decommissioning obligation under the Ontario Nuclear Funds Agreement (ONFA). In 2012, the Decommissioning Fund was not overfunded at the beginning of the year and therefore a higher amount of earnings were recognized. Earnings from the Used Fuel Segregated Fund (Used Fuel Fund) rose, due to favourable market conditions. However, these earnings were partially offset by the lower Decommissioning Fund earnings. Favourable market conditions impact the earnings on the Used Fuel Fund contributions related to incremental fuel bundles in excess of the 2.23 million fuel bundle threshold.

# **Regulated – Hydroelectric Segment**

(millions of dollars)	2013	2012
	747	044
Regulated generation sales <sup>1</sup>	747	644
Variance accounts	51	55
Other	45	25
Total revenue	843	724
Fuel expense	249	246
Variance accounts	19	15
Total fuel expense	268	261
Gross margin	575	463
Operations, maintenance and administration	108	103
Depreciation and amortization	129	33
Property and capital taxes	(2)	(1)
Income before other loss, interest and income taxes	340	328
Other loss	-	4
Income before interest and income taxes	340	324

The Regulated – Hydroelectric segment generation sales included revenue of \$18 million in 2013 and \$16 million in 2012, related to the hydroelectric incentive mechanism.

Income before interest and income taxes for the segment rose by \$16 million during 2013 compared to 2012. This increase in earnings was primarily due to higher generation of 0.4 TWh, partially offset by higher OM&A expenses.

Higher water levels on the Great Lakes and the in-service of the Niagara Tunnel contributed to the increase in generation.

The new rate riders, effective January 1, 2013, resulted in higher generation revenue of \$88 million during 2013 compared to 2012. The revenue impact of the new rate riders was offset by a corresponding increase in amortization expense related to the regulatory variance and deferral accounts. The higher depreciation expense associated with the Niagara Tunnel being declared in-service in March 2013 was offset by a regulatory asset related to the Capacity Refurbishment Variance Account (CRVA), discussed under the heading, *Balance Sheet Highlights*. In addition, the net income impact of the foregone production due to the increase in SBG conditions in 2013 was offset by a regulatory variance account.

The slight increase in OM&A expenses during 2013 was mainly a result of an increase in maintenance activities.

The availability, EFOR and OM&A expense per MWh for the Regulated – Hydroelectric segment for 2013 and 2012 are as follows:

	2013	2012
Availability (%)	90.8	91.4
EFOR (%)	1.0	2.1
Regulated – Hydroelectric OM&A expense per MWh (\$/MWh)	5.71	5.57

The decrease in availability in 2013 was primarily due to an increase in planned outage days at the Sir Adam Beck 1 GS and the DeCew Falls GS. EFOR decreased in 2013 due to a decrease in unplanned outage days. The high availability and low EFOR for 2013 reflected the continued good performance of these regulated generating stations.

#### **Unregulated – Hydroelectric Segment**

(millions of dollars)	2013	2012
Spot market sales	381	290
Other	91	83
Total revenue	472	373
Fuel expense	82	71
Gross margin	390	302
Operations, maintenance and administration	236	236
Depreciation and amortization	74	73
Property and capital taxes	-	(1)
Income (loss) before other loss, interest and income taxes	80	(6)
Other loss	4	4
Income (loss) before interest and income taxes	76	(10)

Income before interest and income taxes for the segment rose by \$86 million during 2013 compared to 2012. The increase was mainly due to an increase in gross margin of \$88 million due to a higher weighted average HOEP and an increase in generation. Higher water levels in 2013 were the main reason for the increase in generation. The increase in generation in 2013 was partially offset by the water spilled due to increased SBG conditions. OPG currently does not have a mechanism to recover the revenues from lost generation from its unregulated hydroelectric stations due to water spilled for SBG management.

Despite the positive impact of higher prices, the prices received for generation from the unregulated hydroelectric stations remained at low levels, due to the low HOEP in 2013 and 2012. Forty-eight of the stations currently included in this segment have been prescribed for rate regulation as a result of amended *Ontario Regulation 53/05*, effective July 1, 2014. The regulation requires the OEB to establish the prices received for the production from these facilities. OPG's current application to the OEB includes these facilities and is discussed under the heading, *OPG's OEB Applications* under *Recent Developments*.

The availability, EFOR and OM&A expense per MWh for Unregulated – Hydroelectric segment for 2013 and 2012 are as follows:

	2013	2012
Availability (%) EFOR (%)	91.8 2.2	91.1 2.0
Unregulated – Hydroelectric OM&A expense per MWh (\$/MWh)	16.98	19.26

The increase in availability for 2013, compared to 2012, was primarily due to a decrease in planned outage days. The slight increase in EFOR in 2013 was mainly a result of an increase in unplanned outage days. The high availability and low EFOR in 2013 reflected the continued strong performance of the unregulated hydroelectric stations.

The decrease in OM&A expense per MWh during 2013, compared to 2012, was due to the impact of higher generation in 2013.

#### **Unregulated – Thermal Segment**

(millions of dollars)	2013	2012
Spot market sales	76	104
Contingency support agreement	361	284
Other	141	119
Total revenue	578	507
Fuel expense	121	162
Gross margin	457	345
Operations, maintenance and administration	362	361
Depreciation and amortization	115	59
Accretion on fixed asset removal liabilities	14	13
Property and capital taxes	16	16
Restructuring	50	3
Loss before other income, interest and income taxes	(100)	(107)
Other (income) loss	(4)	<u> </u>
Loss before interest and income taxes	(96)	(116)

Loss before interest and income taxes in 2013 for the segment was \$96 million, compared to \$116 million in 2012.

The improvement was primarily due to higher contract revenues. This result was partially offset by the recognition of \$50 million in severance costs during 2013. These severance costs relate primarily to the Lambton GS and the Nanticoke GS, as a result of the Shareholder declaration mandating that OPG cease the use of coal at these stations by December 31, 2013.

Depreciation and amortization expenses increased by \$56 million during 2013 compared to 2012. The increase was largely due to the recognition of accelerated depreciation during 2013, as a result of ceasing operation of all remaining units at the Lambton and Nanticoke generating stations by the end of 2013. The increase in depreciation and amortization expense for the Lambton and Nanticoke generating stations is offset by higher payments under the Contingency Support Agreement.

Also contributing to the improvement in results was the recognition of a \$9 million loss in 2012 related to the write-off of costs incurred for the Thunder Bay gas conversion project. Some of these costs were partially recovered in 2013.

The Start Guarantee rate, EFOR, and OM&A expense per MW for the Unregulated – Thermal segment for 2013 and 2012 are as follows:

	2013	2012
Start Guarantee rate (%) EFOR (%)	98.0 8.6	97.5 9.4
Unregulated – Thermal OM&A expense per MW (\$000/MW)	66.5	66.3

The high Start Guarantee rate for 2013 and 2012 reflected the ability of the thermal generating stations to respond to market requirements when needed. The decrease in EFOR for 2013 was a result of a lower number of unplanned outages during the year. OM&A expense per MW for 2013 was comparable to 2012.

#### Other

(millions of dollars)	2013	2012
Devenue	70	64
Revenue	72	64
Operations, maintenance and administration	7	7
Depreciation and amortization	19	19
Property and capital taxes	10	7
Income before other income, interest and income taxes	36	31
Other income	(37)	(26)
Income before interest and income taxes	73	57

Income before interest and income taxes in 2013 was \$73 million, compared to \$57 million in 2012. The increase during 2013 was mainly due to higher earnings from OPG's investments in joint ventures.

OM&A expenses of the generation business segments include an inter-segment service fee for the use of certain property, plant and equipment (PP&E), and intangible assets held within the Other category. The total service fee is recorded as a reduction to the Other category's OM&A expenses.

The service fee included in OM&A expenses by segment in 2013 and 2012 was as follows:

(millions of dollars)	2013	2012
Regulated – Nuclear Generation	23	23
Regulated – Hydroelectric	2	2
Unregulated – Hydroelectric	3	3
Unregulated – Thermal	5	6
Other	(33)	(34)

Interconnected purchases and sales, including those to be physically settled, and unrealized mark-to-market gains and losses on energy trading contracts, are reported in the results of the Other category. They are disclosed on a net basis in the consolidated statements of income. In 2013, if disclosed on a gross basis, revenue and power purchases would have increased by \$94 million (2012 – \$61 million).

Revenue reported in the Other category includes the changes in the fair values of derivative instruments not qualifying for hedge accounting, with the exception of the derivative embedded in the Bruce Lease. This is reflected in the Regulated – Nuclear Generation segment. The fair values of these derivative instruments are reported on the consolidated balance sheets as assets or liabilities. The notional quantities and carrying amounts of the derivative instruments are disclosed in Note 12 and Note 13, respectively, of the audited consolidated financial statements as at and for the years ended December 31, 2013 and 2012.

## Net Interest Expense

Net interest expense for 2013 was \$86 million. This represents a decrease of \$31 million compared to 2012. The decrease was primarily due to an increase in interest capitalized related to the Darlington Refurbishment project. In addition, cost of capital amounts associated with OPG's investment in the Niagara Tunnel that were recorded in the CRVA in 2013 contributed to a reduction to net interest expense. Further details on the CRVA are discussed under the heading, *Balance Sheet Highlights*.

#### **Income Taxes**

OPG follows the liability method of tax accounting for all its business segments. The Company also records an offsetting regulatory asset or liability for the deferred taxes that are expected to be recovered or refunded through future regulated prices charged to customers for generation from OPG's regulated facilities.

Income tax expense for 2013 was \$31 million, compared to income tax expense of \$67 million for 2012. The decrease was primarily due to a reduction in income before income taxes in 2013 and lower income tax components of regulatory assets and liabilities for variance and deferral accounts.

# LIQUIDITY AND CAPITAL RESOURCES

OPG's primary sources of liquidity and capital are funds generated from operations, bank financing, credit facilities provided by the OEFC, and capital market financing. These sources are used for multiple purposes including: to invest in plants and technologies; to fund obligations such as contributions to the pension fund and the Nuclear Funds; and to service and repay long-term debt.

Changes in cash and cash equivalents for 2013 and 2012 are as follows:

(millions of dollars)	2013	2012
Cash and cash equivalents, beginning of period	413	630
Cash flow provided by operating activities Cash flow used in investing activities Cash flow provided by financing activities	1,174 (1,568) 543	876 (1,403) 310
Net increase (decrease)	149	(217)
Cash and cash equivalents, end of period	562	413

For a discussion regarding cash flow provided by operating activities and FFO Interest Coverage, refer to the details under the heading, *Overview of Results* under the section *Highlights*.

## **Investing Activities**

Electricity generation is a capital-intensive business. It requires continued investment in plants and technologies to improve operating performance, increase generating capacity of existing stations, invest in new generating stations, and to maintain and improve service, reliability, safety and environmental performance.

Cash flow used in investing activities in 2013 was \$1,568 million, compared to \$1,403 million in 2012. The increase was primarily due to higher expenditures for the Darlington Refurbishment project and the Lower Mattagami River project. This was partially offset by lower capital expenditures for the Niagara Tunnel project. The Niagara Tunnel was declared in-service in March 2013.

OPG's forecast capital expenditures for 2014 are approximately \$1.6 billion. This includes amounts for hydroelectric development and nuclear refurbishment.

## **Financing Activities**

OPG maintains a \$1 billion revolving committed bank credit facility, which is divided into two \$500 million multi-year term tranches. In the second quarter of 2013, OPG renewed and extended both tranches by one year to May 2018. As at December 31, 2013, there were no outstanding borrowings under the bank credit facility.

As at December 31, 2013, OPG maintained \$25 million of short-term, uncommitted overdraft facilities and \$374 million of short-term, uncommitted credit facilities, which support the issuance of the Letters of Credit. OPG uses Letters of Credit to support its supplementary pension plans and for other general corporate purposes. As at December 31, 2013, a total of \$327 million of Letters of Credit had been issued. This included \$302 million for the supplementary pension plans, \$24 million for general corporate purposes, and \$1 million related to the operation of the PEC.

The Company has an agreement, which expires November 30, 2014, to sell an undivided co-ownership interest of up to \$250 million in its current and future accounts receivable to an independent trust. As at December 31, 2013, of the \$302 million of Letters of Credit issued for the supplementary pension plans, \$80 million were issued under this agreement.

OPG also maintains a Niagara Tunnel project credit facility with the OEFC for an amount up to \$1.6 billion. As at December 31, 2013, advances under this facility were \$1,065 million, including \$40 million of new borrowings during 2013. OPG's borrowing under this facility is limited to the cost of the project. This credit facility expires on December 31, 2014.

The Lower Mattagami Energy Limited Partnership (LME) maintains a \$600 million bank credit facility to support the funding requirements for the Lower Mattagami River project. The facility consists of two tranches. The first tranche of \$400 million was reduced to \$300 million during the third quarter of 2013, and the maturity date was extended by one year to August 17, 2018. The second tranche of \$300 million has a maturity date of August 17, 2015. As at December 31, 2013, \$32 million of commercial paper was outstanding under this program. In 2011, OPG executed a \$700 million credit facility with the OEFC in support of the Lower Mattagami River project. As at December 31, 2013, there were no outstanding borrowings under this credit facility. In February 2013, the LME issued senior notes totalling \$275 million with a maturity date of 2046. The effective interest rate for these notes was 4.3 percent and the coupon interest rate was 4.2 percent. In September 2013, the LME issued senior notes totalling \$200 million with a maturity date of 2043. The effective interest rate for these notes totalling \$200 million with a maturity enterest rate for these notes was 5.1 percent and the coupon interest rate was 4.9 percent.

As at December 31, 2013, OPG's long-term debt outstanding was \$5,625 million, including \$5 million due within one year. OPG entered into an agreement with the OEFC in December 2013 for a \$500 million general corporate credit facility. As of December 31, 2013, there were no outstanding borrowings under the credit facility. This credit facility expires on December 31, 2014.

## **Future Pension Contributions**

Minimum pension contributions are set out in an actuarial valuation for funding purposes. In accordance with applicable law and regulations, OPG is required to complete a new actuarial valuation with an effective date no later than January 1, 2014. OPG is required to file this valuation by September 30, 2014. As a result of the valuation, OPG may be required to significantly increase its pension contributions.

In the 2013 Ontario Budget, the government announced its intention to establish a working group to address pension challenges in the electricity sector.

# **Contractual and Commercial Commitments**

OPG's contractual obligations and other significant commercial commitments as at December 31, 2013, are as follows:

(millions of dollars)	2014	2015	2016	2017	2018	Thereafter	Total
Contractual obligations:							
Fuel supply agreements	183	208	163	143	126	159	982
Contributions under the ONFA <sup>1</sup>	139	143	150	163	193	2,706	3,494
Long-term debt repayment	5	593	273	1,103	398	3,253	5,625
Interest on long-term debt	262	256	242	223	167	2,104	3,254
Unconditional purchase obligations	98	97	8	-	-	-	203
Operating lease obligations	16	17	15	15	13	70	146
Commitments related to Darlington refurbishment <sup>2</sup>	200	-	-	-	-	-	200
Pension contributions <sup>3</sup>	300	-	-	-	-	-	300
Operating licence	41	25	25	25	26	-	142
Other - primarily accounts payable	449	33	14	13	12	69	590
	1,693	1,372	890	1,685	935	8,361	14,936
Significant commercial commitments:	·					·	
Niagara Tunnel	5	-	-	-	-	-	5
Lower Mattagami	298	65	-	-	-	-	363
Atikokan	16	-	-	-	-	-	16
Total	2,012	1,437	890	1,685	935	8,361	15,320

<sup>1</sup> Contributions under the ONFA are based on the 2012 ONFA Reference Plan contribution schedule approved in 2012.

<sup>2</sup> Estimated currently committed costs to close the project, including demobilization of project staff and cancellation of existing contracts, and material orders.

<sup>3</sup> The pension contributions include ongoing funding requirements and additional funding requirements towards the deficit, in accordance with the actuarial valuation of the OPG registered pension plan as at January 1, 2011. The next actuarial valuation of the OPG plan must have an effective date no later than January 1, 2014. The pension contributions are affected by various factors including market performance, changes in actuarial assumptions, plan experience, changes in the pension regulatory environment, and the timing of funding valuations. Funding requirements after 2014 for the OPG registered pension plan are excluded due to significant variability in the assumption required to project the timing of future cash flows. The amount of OPG's additional voluntary contribution, if any, is revisited from time to time.

# **BALANCE SHEET HIGHLIGHTS**

The following section provides highlights of OPG's audited consolidated financial position using selected balance sheet data:

(millions of dollars)	2013	2012
Property, plant and equipment - net	16,738	15,860
The increase was primarily due to construction in progress additions for the Lower Mattagami River project and the refurbishment of Darlington Nuclear GS. The increase was partially offset by depreciation.		
Nuclear fixed asset removal and nuclear waste management funds (current and non-current portions)	13,496	12,717
The increase was primarily due to earnings on the Nuclear Funds and contributions to the Used Fuel Fund, partially offset by reimbursements of expenditures on nuclear fixed asset removal and nuclear waste management.		
Regulatory assets (current and non-current portions)	5,400	6,478
The decrease was primarily due to the reduction in the regulatory asset related to pension and OPEB as a result of the re-measurement of the pension and OPEB liabilities and the amortization of the regulatory balances related to the new rate riders, effective January 1, 2013. This decrease was partially offset by additions to the Pension and OPEB Cost Variance Account and other variance and deferral accounts including the CRVA.		
Long-term debt (including debt due within one year)	5,625	5,114
The increase was due to the issuance of debt of \$475 million for the Lower Mattagami River project and, \$40 million of new borrowings for the Niagara Tunnel project, offset by debt repayments.		
Fixed asset removal and nuclear waste management liabilities	16,257	15,522
The increase was primarily a result of accretion expense due to the passage of time, partially offset by expenditures on nuclear fixed asset removal and waste management activities.		
Pension liabilities Other post-employment benefit liabilities	2,741 2,628	3,621 3,076
Pension and OPEB liabilities decreased primarily due to the re-measurement of the liabilities at the end of 2013 reflecting higher discount rates and the favourable performance of the pension fund. The decrease in the liabilities was partially offset by the impact of mortality assumption changes as part of the 2013 actuarial valuation for accounting purposes. A discussion of the new valuation can be found under the heading, <i>Pension and Other Post-Employment Benefits</i> in the <i>Changes in Accounting Policies and Estimates section</i> .		

# **Capacity Refurbishment Variance Account**

Pursuant to *Ontario Regulation 53/05*, the OEB has authorized the CRVA. The account captures variances from the forecasts reflected in the regulated prices for capital and non-capital costs incurred to increase the output of, refurbish, or add operating capacity to one or more of the regulated facilities.

As the existing regulated prices established in 2011 do not reflect the impact of the Niagara Tunnel, OPG recorded an increase in the regulatory asset for the CRVA of \$88 million in 2013 related to the Niagara Tunnel that was declared in-service in March 2013. The increase in the regulatory asset includes depreciation on the Niagara Tunnel assets, the cost of capital associated with OPG's investment in these assets, and related income tax effects. Corresponding decreases to depreciation expense, net interest expense and income tax expense were also recognized in 2013. The cost of capital amount was recorded as a reduction in net interest expense, as OPG limits the portion of cost of capital additions recognized as a regulatory asset to the amount calculated using the average rate of capitalized interest applied to construction and development in progress. OPG's September 2013 application to the OEB for new regulated prices includes the impact of the Niagara Tunnel starting in 2014 and requests recovery of the balance of the CRVA related to the Niagara Tunnel as at December 31, 2013.

The balance of the CRVA as at December 31, 2013 also includes variances from forecasts reflected in regulated prices for non-capital costs and impacts of assets placed in-service related to the refurbishment of the Darlington GS, non-capital costs related to continued operations at Pickering GS, and other projects related to the prescribed facilities.

The November 2013 amendment of *Ontario Regulation 53/05* requiring OEB to establish regulated prices for 48 of OPG's currently unregulated hydroelectric facilities extends the scope of the CRVA to these facilities upon their regulation.

Detailed descriptions of the regulatory assets and liabilities for variance and deferral accounts authorized by the OEB for OPG's regulated facilities are contained in Note 5 of the audited consolidated financial statements as at and for the year ended December 31, 2013.

# **Off-Balance Sheet Arrangements**

In the normal course of operations, OPG engages in a variety of transactions that, under US GAAP, are either not recorded in the Company's consolidated financial statements or are recorded in the Company's consolidated financial statements using amounts that differ from the full contract amounts. Principal off-balance sheet activities for OPG include guarantees, and long-term fixed price contracts.

## **Guarantees**

As part of normal business, OPG and certain of its subsidiaries and joint ventures enter into various agreements to provide financial or performance assurance to third parties. Such agreements include guarantees, standby Letters of Credit and surety bonds. For more details on OPG's guarantees, refer to Note 15 of OPG's audited consolidated financial statements as at and for the year ended December 31, 2013.

# **CRITICAL ACCOUNTING POLICIES AND ESTIMATES**

OPG's significant accounting policies, including the impact of future accounting pronouncements, are outlined in Note 3 of OPG's 2013 audited consolidated financial statements. Certain of these policies are recognized as critical accounting policies by virtue of the subjective and complex judgments and estimates required around matters that are inherently uncertain and could result in materially different amounts being reported under different conditions or assumptions. The critical accounting policies and estimates that affect OPG's consolidated financial statements are highlighted below.

# Variable Interest Entities (VIE)

OPG performs ongoing analysis to assess whether it holds any VIEs. VIEs of which OPG is deemed to be the primary beneficiary are consolidated. The primary beneficiary of a VIE has both the power to direct the activities of the entity that most significantly impact its economic performance and the obligation to absorb losses of the entity that

could potentially be significant to the Company. In circumstances where OPG is not deemed to be the primary beneficiary, the VIE is not recorded in OPG's consolidated financial statements.

OPG holds a variable interest in the Nuclear Waste Management Organization (NWMO), of which it is the primary beneficiary. Accordingly, the applicable amounts in the accounts of the NWMO, after elimination of all significant intercompany transactions, are consolidated. Refer to Note 3 of OPG's 2013 audited consolidated financial statements for further details.

# **Rate Regulated Accounting**

The Ontario Energy Board Act, 1998 and Ontario Regulation 53/05 provide that OPG receives regulated prices for electricity generated from the Sir Adam Beck 1, 2 and Pump generating station, DeCew Falls 1 and 2, and R.H. Saunders hydroelectric facilities, and the Pickering and Darlington nuclear facilities. OPG's regulated prices for these facilities are determined by the OEB. Forty-eight of OPG's currently unregulated hydroelectric generating facilities have been prescribed for rate regulation, effective July 1, 2014.

The OEB is a self-funding Crown corporation. Its mandate and authority come from the *Ontario Energy Board Act*, *1998*, the *Electricity Act*, *1998*, and a number of other provincial statutes. The OEB is an independent, quasi-judicial tribunal that reports to the Legislature of the Province through the Minister of Energy. It regulates market participants in the Province's natural gas and electricity industries. The OEB carries out its regulatory functions through public hearings and other more informal processes such as consultations.

US GAAP recognizes that rate regulation can create economic benefits and obligations that are required by the regulator to be obtained from, or settled with, the ratepayers. When the Company assesses that there is sufficient assurance that incurred costs in respect of the regulated facilities will be recovered in the future, those costs are deferred and reported as a regulatory asset. When the Company is required to refund amounts to ratepayers in the future in respect of the regulated facilities, including amounts related to costs that have not been incurred and for which the OEB has provided recovery through current regulated prices, the Company records a regulatory liability.

Certain of the regulatory assets and liabilities recognized by the Company relate to variance and deferral accounts authorized by the OEB including those authorized pursuant to *Ontario Regulation 53/05*. Variance accounts capture differences between actual costs and revenues, and the corresponding forecast amounts approved in the setting of regulated prices. The measurement of these regulatory assets and liabilities is subject to certain estimates and assumptions, including assumptions made in the interpretation of *Ontario Regulation 53/05* and the OEB's decisions. The estimates and assumptions made in the interpretation of the regulation and the OEB's decisions are reviewed as part of the OEB's regulatory process.

Regulatory assets and liabilities for variance and deferral account balances approved by the OEB for inclusion in regulated prices are amortized based on approved recovery periods. Disallowed balances, including associated interest, are charged to operations in the period that the OEB's decision is issued.

In addition to regulatory assets and liabilities for variance and deferral accounts authorized by the OEB, OPG recognizes regulatory assets for unamortized amounts recorded in AOCI in respect of pension and OPEB obligations, and deferred income taxes, in order to reflect the expected recovery of these amounts in respect of the regulated operations through future regulated prices charged to customers. There are measurement uncertainties related to these balances due to the assumptions made in the determination of pension and OPEB obligations and deferred income taxes attributed to the regulated facilities. Further discussion related to OPG's pension and OPEB obligations and deferred income taxes can be found under the headings, *Income Taxes and Investment Tax Credits* and *Pension and Other Post-Employment Benefits* within the *Critical Accounting Policies and Estimates* section.

See Notes 3, 5, 8, 9, and 11 of OPG's 2013 audited consolidated financial statements for additional disclosures related to the OEB's decisions, regulatory assets and liabilities, and rate regulated accounting.

#### **Income Taxes and Investment Tax Credits**

OPG is exempt from income tax under the *Income Tax Act* (Canada). However, under the *Electricity Act, 1998*, OPG is required to make payments in lieu of corporate income taxes to the OEFC. These payments are calculated in accordance with the *Income Tax Act* (Canada) and the *Taxation Act, 2007* (Ontario), as modified by the *Electricity Act, 1998* and related regulations. This results in OPG effectively paying taxes similar to what would be imposed under the federal and Ontario tax acts.

OPG's operations are complex and the computation of the provision for income taxes involves interpretation of the various tax statutes and regulations. OPG has taken certain filing positions in calculating the amount of its income tax provision. These filing positions may be challenged on audit and some of them possibly disallowed, resulting in a potential significant change in OPG's tax provision upon reassessment.

OPG follows the liability method of accounting for income taxes. Under the liability method, deferred income tax assets and liabilities are determined based on differences between the accounting and tax bases of assets and liabilities. Deferred amounts are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. The effect of a change in tax rates on deferred income tax assets and liabilities is included in income in the period the change is enacted.

If management determines that it is more likely than not that some, or all, of a deferred income tax asset will not be realized, a valuation allowance is recorded to report the balance at the amount expected to be realized.

OPG recognizes deferred income taxes associated with its rate regulated operations and records an offsetting regulatory asset or liability for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers.

Tax benefits associated with income tax positions taken, or expected to be taken, in a tax return and investment tax credits are recorded only when the more likely than not recognition threshold is satisfied. Tax benefits and investment tax credits recognized are measured at the largest amount of benefit that is greater than 50 percent likely of being realized upon settlement.

Investment tax credits are recorded as a reduction to income tax expense. OPG classifies interest and penalties associated with unrecognized tax benefits as income tax expense.

Deferred income tax assets of \$5,757 million (2012 – \$5,914 million) have been recorded on the consolidated balance sheet at December 31, 2013. The Company believes there will be sufficient future taxable income and capital gains that will permit the use of these deductions and carry-forwards.

Deferred income tax liabilities of \$6,336 million (2012 – \$6,409 million) have been recorded on the consolidated balance sheet as at December 31, 2013.

#### PP&E, Intangible Assets and Depreciation and Amortization

PP&E and intangible assets are recorded at cost. Interest costs incurred during construction and development are capitalized as part of the cost of the asset, based on the interest rates on OPG's long-term debt. Expenditures for replacements of major components are capitalized.

Depreciation and amortization rates for the various classes of assets are based on their estimated service lives. Any asset removal costs that have not been specifically provided for in current or previous periods are charged to OM&A expenses. Repairs and maintenance costs are also expensed when incurred.

PP&E are depreciated on a straight-line basis except for computers, and transport and work equipment. These are mostly depreciated on a declining balance basis. Intangible assets, which consist of major application software, are amortized on a straight-line basis.

The accounting estimates related to asset depreciation require significant management judgment to assess the appropriate useful lives of OPG's PP&E and intangible assets including consideration of various technological and other factors.

# Impairment of Long-Lived Assets

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The review is based on the presence of impairment indicators such as the future economic benefit of the assets and external market conditions. The net carrying amount of assets is considered impaired if it exceeds the sum of the estimated undiscounted cash flows expected to result from the asset's use and eventual disposition. In cases where the sum of the undiscounted expected future cash flows is less than the carrying amount, an impairment loss is recognized. This loss equals the amount by which the carrying amount exceeds the fair value. Fair value is determined using expected discounted cash flows when quoted market prices are not available. The impairment is recognized in income in the period in which it is identified.

Various assumptions and accounting estimates are required to determine whether an impairment loss should be recognized and, if so, the value of such loss. This includes factors such as short-term and long-term forecasts of the future market price of electricity, the demand for and supply of electricity, the in-service dates of new generating stations, inflation, fuel prices, capital expenditures and station useful lives. The amount of the future net cash flow that OPG expects to receive from its fixed assets could differ materially from the net book values recorded in OPG's consolidated financial statements.

The carrying value of investments accounted for under the equity method are reviewed for the presence of any indicators of impairment. If an impairment exists and is determined to be other-than-temporary, an impairment charge is recognized. This charge equals the amount by which the carrying value exceeds the investment's fair value.

# Nuclear Fixed Asset Removal and Nuclear Waste Management Funds

## **Decommissioning Fund**

The Decommissioning Fund was established to fund the future costs of nuclear fixed asset removal, long-term L&ILW management, and a portion of used fuel storage costs after station life. Upon termination of the ONFA, the Province has a right to any excess funds in the Decommissioning Fund, which is the excess of the fair market value of the Decommissioning Fund assets over the estimated completion costs as per the most recently approved ONFA Reference Plan. When the Decommissioning Fund is overfunded, OPG limits the earnings it recognizes in its consolidated financial statements by recording a payable to the Province, such that the balance of the Decommissioning Fund is equal to the cost estimate of the liability based on the most recently approved ONFA Reference Plan. The payable to the Province could be reduced in subsequent periods in the event that the Decommissioning Fund earns less than its target rate of return or in the event that a new ONFA Reference Plan is approved with a higher estimated decommissioning liability. When the Decommissioning Fund is underfunded, the earnings on the Decommissioning Fund reflect actual fund returns based on the market value of the assets.

## Used Fuel Fund

Under the ONFA, the Province guarantees OPG's annual return in the Used Fuel Fund at 3.25 percent plus the change in the Ontario Consumer Price Index (CPI) for funding related to the first 2.23 million used fuel bundles (committed return). OPG recognizes the committed return on the Used Fuel Fund and includes it in the earnings on the nuclear fixed asset removal and nuclear waste management funds. The difference between the committed return on the Used Fuel Fund and the actual market return, based on the fair value of the Used Fuel Fund's assets, which includes realized and unrealized returns, is recorded as due to or due from the Province. The amount due to or due from the Province represents the amount OPG would pay to or receive from the Province if the committed return were to be settled as of the balance sheet date.

As prescribed under the ONFA, OPG's contributions for incremental fuel bundles are not subject to the Province's guaranteed rate of return, but rather earn a return based on changes in the market value of the assets of the Used Fuel Fund.

As required by the terms of the ONFA, the Province has provided a Provincial Guarantee to the CNSC since 2003 on behalf of OPG. The *Nuclear Safety and Control Act* (Canada) requires OPG to have sufficient funds available to discharge the current nuclear decommissioning and waste management liabilities. The Provincial Guarantee provides for any shortfall between the CNSC consolidated financial guarantee requirement and the Nuclear Funds. OPG pays the Province an annual guarantee fee of 0.5 percent of the amount of the Provincial Guarantee provided by the Province.

The current value of the Provincial Guarantee of \$1,551 million is in effect through to the end of 2017. In January 2014, OPG paid a guarantee fee of \$8 million for 2014 based on a Provincial Guarantee amount of \$1,551 million. In January 2013, OPG paid a guarantee fee of \$8 million.

## Pension and Other Post-Employment Benefits

The determination of OPG's pension and OPEB costs and obligations is based on accounting policies and assumptions used in calculating such amounts.

## Accounting Policy

OPG's post-employment benefit programs consist of a contributory defined benefit registered pension plan, a defined benefit supplementary pension plan, and other post retirement benefits (OPRB) including group life insurance and health care benefits, and long-term disability (LTD) benefits. Post-employment benefit programs are also provided by the NWMO, which is consolidated into OPG's financial results. Information on the Company's post-employment benefit programs is presented on a consolidated basis.

OPG accrues its obligations under pension and OPEB plans in accordance with US GAAP. The obligations for pension and OPRB are determined using the projected benefit method pro-rated on service. The obligation for LTD benefits is determined using the projected benefit method on a terminal basis. Pension and OPEB obligations are impacted by factors including interest rates, adjustments arising from plan amendments, changes in demographic assumptions, experience gains or losses, salary levels, inflation, and cost escalation. Pension and OPEB costs, and obligations are determined annually by independent actuaries using management's best estimate assumptions.

Pension fund assets include equity securities, corporate and government debt securities, pooled funds, real estate, infrastructure and other investments. These assets are managed by professional investment managers. The funds do not invest in equity or debt securities issued by OPG. Pension fund assets are valued using market-related values for purposes of determining the amortization of actuarial gains or losses and the expected return on plan assets. The market-related value recognizes gains and losses on equity assets relative to a six percent assumed real return over a five-year period.

Pension and OPEB costs include current service costs, interest costs on the obligations, the expected return on pension plan assets, adjustments for plan amendments and adjustments for actuarial gains or losses, which result from changes in assumptions and experience gains and losses. Past service costs or credits arising from pension and OPRB plan amendments are amortized on a straight-line basis over the expected average remaining service life to full eligibility of the employees covered by the plan. Past service costs or credits arising from amendments to LTD benefits are immediately recognized as OPEB costs in the period incurred. Due to the long-term nature of pension and OPRB liabilities, the excess of the net cumulative unamortized gain or loss, over 10 percent of the greater of the benefit obligation and the market-related value of the plan assets (corridor), is amortized over the expected average remaining service life of the employees since OPG expects to realize the associated economic benefit over that period. Actuarial gains or losses for LTD benefits are immediately recognized as OPEB costs to realize the associated economic benefit out that period.

OPG recognizes on its consolidated balance sheets the funded status of its defined benefit plans. The funded status is measured as the difference between the fair value of plan assets and the benefit obligation on a plan-by-plan basis.

Actuarial gains or losses and past service costs or credits that arise during the year that are not recognized immediately as components of benefit costs are recognized as increases or decreases in other comprehensive income (OCI), net of income taxes. These unamortized amounts in AOCI are subsequently reclassified and recognized as components of pension and OPRB costs as discussed above.

OPG records an offsetting regulatory asset or liability for the portion of the adjustments to AOCI that is attributable to the regulated operations in order to reflect the expected recovery or refund of these amounts through future regulated prices charged to customers. For the recoverable or refundable portion attributable to regulated operations, OPG records a corresponding change in this regulatory asset or liability for the amount of the increases or decreases in OCI and for the reclassification of AOCI amounts into benefit costs during the period.

When the recognition of the transfer of employees and employee-related benefits gives rise to both a curtailment and a settlement, the curtailment is accounted for prior to the settlement. A curtailment is the loss by employees of the right to earn future benefits under the plan. A settlement is the discharge of a plan's liability.

## Accounting Assumptions

Assumptions are significant inputs to actuarial models that measure pension and OPEB obligations and related effects on operations. Two critical assumptions – discount rate and inflation – are important elements in the determination of benefit costs and obligations. In addition, the expected return on plan assets is a critical assumption in the determination of registered pension plan costs. These assumptions, as well as other assumptions involving demographic factors such as retirement age, mortality, and employee turnover, are evaluated periodically by management in consultation with independent actuaries. During the evaluation process, the assumptions are updated to reflect past experience and expectations for the future. Actual results in any given year will often differ from actuarial assumptions because of economic and other factors. In accordance with US GAAP, for pension and OPRB, the impact of these updates and differences on the respective benefit obligations is accumulated and amortized over future periods; for LTD benefits, the impact of these updates and differences is immediately recognized as OPEB costs in the period incurred.

The discount rates, which are representative of the AA corporate bond yields, are used to calculate the present value of the expected future cash flows on the measurement date to determine the projected benefit obligations for the Company's employee benefit plans. A lower discount rate increases the benefit obligations and increases benefit costs. The expected rate of return on plan assets is based on current and expected asset allocation, as well as the expected return considering long-term historical risks and returns associated with each asset class within the plan portfolio. A lower expected rate of return on plan assets increases pension cost.

## **Asset Retirement Obligation**

As at December 31, 2013, OPG's asset retirement obligation (ARO) was \$16,257 million (2012 – \$15,522 million). OPG's ARO consists of fixed asset removal and nuclear waste management liabilities. The ARO is comprised of expected costs to be incurred up to and beyond termination of operations and the closure of nuclear and thermal generating plant facilities and other facilities. The liabilities associated with decommissioning the nuclear generating stations and long-term used nuclear fuel management comprise the most significant amounts of the total obligation. Costs will be incurred for activities such as:

- preparation for safe storage
- safe storage
- dismantling
- demolition and disposal of facilities and equipment
- remediation and restoration of sites
- ongoing and long-term management of nuclear used fuel bundles and L&ILW material.

Nuclear station decommissioning consists of preparation and placement of stations into a safe state condition followed by a 30-year safe store period prior to station dismantling and site restoration. Under the terms of the lease agreement with Bruce Power, OPG continues to be responsible for the nuclear fixed asset removal and nuclear waste management liabilities associated with the Bruce Nuclear generating stations. Under the lease agreement, Bruce Power must return the Bruce stations together de-watered and de-fueled to OPG. The de-watering and defueling costs are not part of OPG's ARO.

The following costs are recognized as a liability:

- the present value of the costs of decommissioning the nuclear and thermal production facilities and other facilities after the end of their useful lives
- the present value of the fixed cost portion of nuclear waste management programs that are required based on the total volume of waste expected to be generated over the assumed life of the stations
- the present value of the variable cost portion of nuclear waste management programs taking into account actual waste volumes generated to date.

The significant assumptions underlying operational and technical factors used in the calculation of the accrued liabilities are subject to periodic review. Changes to these assumptions, including changes to assumptions on the timing of the programs, station end of life dates, financial indicators or the technology employed may result in significant changes to the value of the accrued liabilities. With programs of this duration and the evolving technology to handle the nuclear waste, there is a significant degree of uncertainty surrounding the measurement accuracy of the costs for these programs. These costs may increase or decrease over time. The estimates of the Nuclear Liabilities are reviewed on an ongoing basis as part of the overall nuclear waste management program. Changes in the Nuclear Liabilities resulting from changes in assumptions or estimates that impact the amount of the originally estimated undiscounted cash flows are recorded as an adjustment to the liabilities. Any resulting changes in the related asset retirement costs are capitalized as part of the carrying amount of nuclear fixed assets.

For the purposes of calculating OPG's nuclear fixed asset removal and nuclear waste management liabilities, as at December 31, 2013, consistent with the current accounting end of life assumptions, nuclear station decommissioning is projected to occur over the next 41 years.

The liability for non-nuclear fixed asset removal was \$354 million as at December 31, 2013 (2012 – \$345 million). This liability primarily represents the estimated costs of decommissioning OPG's thermal generating stations at the end of their service lives. The liability is based on third party cost estimates after an in-depth review of active plant sites and an assessment of required clean-up and restoration activities. In 2011, OPG completed a review of the liability for most of its thermal generating stations. As at December 31, 2013, the estimated retirement dates of the thermal stations for the purposes of this liability are between 2014 and 2030. The undiscounted amount of estimated future cash flows associated with the non-nuclear liabilities is \$491 million.

OPG has no legal obligation associated with the decommissioning of its hydroelectric generating facilities and the costs cannot be reasonably estimated because of the long service life of these assets. With either maintenance efforts or rebuilding, the water control structures are assumed to be used for the foreseeable future. Accordingly, OPG has not recognized a liability for the decommissioning of its hydroelectric generating facilities.

The liability for the nuclear fixed asset removal and nuclear waste management on a present value basis as at December 31, 2013 was \$15,903 million (2012 – \$15,177 million). The undiscounted cash flows related to expenditures for OPG's nuclear fixed asset removal and nuclear waste management liabilities in 2013 dollars as at December 31, 2013 over the next five years and thereafter are as follows:

(millions of dollars)	2014	2015	2016	2017	2018	Thereafter	Total
Expenditures for nuclear fixed asset removal and nuclear waste management <sup>1</sup>	277	355	487	522	470	31,734	33,845

<sup>1</sup> Most of the above expenditures are expected to be reimbursed by OPG's Nuclear Funds as established by the ONFA. The contributions required under the ONFA are not included in these undiscounted cash flows but are reflected in the table under the heading, *Contractual and Commercial Commitments*.

OPG sets aside and invests funds held in segregated custodian and trustee accounts specifically for discharging its nuclear fixed asset removal and nuclear waste management liabilities. In accordance with the ONFA between OPG and the Province, OPG established a Used Fuel Fund and a Decommissioning Fund. OPG jointly oversees the investment management of the Nuclear Funds with the Province. The assets of the Nuclear Funds are maintained in third party custodian accounts that are segregated from the rest of OPG's assets.

## **Environmental Liabilities**

Current operations are subject to regulation with respect to emissions to air, water, and land as well as other environmental matters by federal, provincial, and local authorities. Environmental liabilities are recorded when it is considered likely that a liability has been incurred and the amount of the liability can be reasonably estimated at the date of the financial statements. The cost of obligations associated with current operations is provided for on an ongoing basis. Management believes it has made adequate provision in the consolidated financial statements to meet certain other environmental obligations. As at December 31, 2013, OPG's environmental liabilities were \$15 million (2012 – \$17 million), the primary component of which is the land remediation program.

## **Derivatives**

All derivatives, including embedded derivatives that must be separately accounted for, generally are classified as held-for-trading and recorded at fair value in the consolidated balance sheets. Transaction costs are expensed as incurred for financial instruments classified or designated as held-for-trading.

Derivatives qualify for hedge accounting if they meet stringent documentation requirements and the derivative instrument that is designated as a hedge is expected to effectively hedge the identified risk throughout the life of the hedged item. At the inception of a hedging relationship, OPG documents the relationship between the hedging instrument and the hedged item, its risk management objective and its strategy for undertaking the hedge. A documented assessment is made, both at the inception of a hedge and on an ongoing basis, of whether or not the derivatives that are used in hedging transactions are highly effective in offsetting the changes attributable to the hedged risks in the fair values or cash flows of the hedged items.

Specifically for cash flow hedges, the portion of the derivative gain or loss that is effective in offsetting the change in the cost or value of the underlying exposure is deferred in AOCI and later reclassified into net income when the underlying transaction occurs. Gains and losses on interest rate hedges are recorded as an adjustment to interest expense for the debt being hedged. Gains and losses that do not meet the effectiveness criteria are recorded in net income in the period incurred. When a derivative instrument hedge ceases to be effective as a hedge or a hedged item ceases to exist, any associated deferred gains or losses are derecognized from AOCI and are recognized in income in the current period.

Some of OPG's unregulated generation is exposed to changes in electricity prices associated with a wholesale spot market for electricity in Ontario. All derivative contracts not designated as hedges are recorded on the balance sheet as derivative assets or liabilities at fair value with changes in fair value recorded in the revenue of the Other category.

## **Fair Value Measurements**

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly arm's-length transaction between market participants at the measurement date. Fair value measurements are required to reflect the assumptions that market participants would use in pricing an asset or liability based on the best available information. These assumptions include the risks inherent in a particular valuation technique, such as a pricing model, and the risks inherent in the inputs to the model.

Financial assets and liabilities, including exchange traded derivatives and other financial instruments, measured at fair value and for which quoted prices in an active market are available, are determined directly from those quoted market prices.

For financial instruments for which quoted market prices are not directly available, fair values are estimated using forward price curves developed from observable market prices or rates. The estimation of fair value may include the use of valuation techniques or models, based wherever possible on assumptions supported by observable market prices or rates prevailing at the consolidated balance sheet dates. This is the case for over-the-counter derivatives, which includes energy commodity derivatives, foreign exchange derivatives, and interest rate swap derivatives. Valuation models use general assumptions and market data and therefore do not reflect the specific risks and other factors that would affect a particular instrument's fair value. The methodologies used for calculating the fair value adjustments are reviewed on an ongoing basis to ensure that they remain appropriate. If the valuation technique or model is not based on observable market data, specific valuation techniques are used primarily based on recent comparable transactions, comparable benchmark information, bid/ask spread of similar transactions, and other relevant factors.

OPG's use of financial instruments exposes the Company to various risks, including credit risk, foreign currency risk and interest rate risk. A discussion of how OPG manages these and other risks is found under the heading, *Risk Management*.

## CHANGES IN ACCOUNTING POLICIES AND ESTIMATES

## **Useful Lives of Long-Lived Assets**

As a result of the announcement by the Minister of Energy to advance the date to cease operation of the remaining coal-fired units at the Lambton and Nanticoke generating stations, OPG has revised the end of life dates for the purposes of calculating depreciation from December 2014 to December 2013 for both generating stations. This change in estimate increased depreciation expense in 2013 by \$58 million reflecting the advancement of the 2014 expense. This increase in depreciation expense was offset by revenue from the Contingency Support Agreement with the OEFC.

## **Regulatory Assets Related to Newly Regulated Hydroelectric Facilities**

Forty-eight of OPG's currently unregulated hydroelectric facilities have been prescribed for rate regulation, effective on July 1, 2014. Upon the effective date of the regulation, OPG expects to recognize additional regulatory assets related to deferred income taxes, and unamortized amounts recorded in AOCI in respect of pension and OPEB obligations. The recognition of the increase in regulatory assets related to deferred income taxes expected to be recovered from customers through future regulated prices is expected to result in an extraordinary gain of approximately \$250 million in the consolidated statements of income. The additional regulatory assets related to

pension and OPEB obligations are expected to result in an increase of approximately \$200 million in OCI, net of income taxes.

## Pension and Other Post-Employment Benefits

The weighted average discount rate used to determine the projected pension benefit obligations and the projected benefit obligations for OPEB as at December 31, 2013 was 4.9 percent. This represents an increase, compared to the 4.3 percent discount rate that was used to determine the obligations as at December 31, 2012.

In 2013, OPG conducted an actuarial valuation for accounting purposes for its pension and OPEB plans using demographic data as at January 1, 2013, and assumptions as at December 31, 2013. As part of the valuation, the plan's demographic assumptions were reviewed and revised by independent actuaries. The revised assumptions include the adoption of:

- an updated OPG mortality table that captures the recent experience of OPG pension plan members
- a new scale for expected rates of improvement in future mortality.

The deficit for the registered pension plans decreased from \$3,332 million as at December 31, 2012 to \$2,461 million as at December 31, 2013 largely as a result of the increase in the discount rates at 2013 year end and the gain on pension fund assets in 2013, partially offset by the impact of the new mortality assumptions.

The projected benefit obligations for OPEB decreased from \$3,174 million at December 31, 2012 to \$2,719 million as at December 31, 2013. This decrease was largely due to the increase in the discount rates and the lower per capita health care claims costs assumption. It was partially offset by the impact of the new mortality assumptions.

As a result of the accounting policy for pension and OPEB, as at December 31, 2013, the unamortized net actuarial loss and unamortized past service costs for the pension and OPEB plans totalled \$3,899 million (2012 – \$5,593 million). Details of the unamortized net actuarial loss and unamortized past service costs at December 31, 2013 and 2012 are as follows:

	Registered Pension Plans		Supplementary Pension Plans		Other Post- Employment Benefits	
(millions of dollars)	2013	2012	2013	2012	2013	2012
Net actuarial (gain) loss not yet subject to amortization due to use of market-related values	(886)	91	-	-	-	-
Net actuarial loss not subject to amortization due to use of the corridor	1,339	1,367	29	30	245	288
Net actuarial loss subject to amortization	3,043	3,079	50	72	78	662
Unamortized net actuarial loss	3,496	4,537	79	102	323	950
Unamortized past service costs	-	-	-	-	1	4

A change in assumptions, holding all other assumptions constant, would increase (decrease) 2013 costs as follows:

(millions of dollars)	Registered Pension Plans <sup>1</sup>	Supplementary Pension Plans <sup>1</sup>	Other Post- Employment Benefits <sup>1</sup>	
Expected long-term rate of return				
0.25% increase	(26)	na	na	
0.25% decrease	26	na	na	
0.20 // 400/0400	20	na	na	
Discount rate				
0.25% increase	(52)	(1)	(13)	
0.25% decrease	<b>`</b> 55 <sup>´</sup>	1	`14 <sup>´</sup>	
Inflation 0.25% increase 0.25% decrease	81 (85)	2 (2)	1 (1)	
Salary increases				
0.25% increase	19	4	1	
0.25% decrease	(18)	(3)	(1)	
Health care cost trend rate				
1% increase	na	na	94	
1% decrease	na	na	(69)	

na - change in assumption not applicable.

<sup>1</sup> Excluding the impact of the Pension OPEB Cost Variance Account.

## **Recent Accounting Pronouncements**

#### Comprehensive Income - Reporting of Amounts Reclassified Out of Accumulated Other Comprehensive Income

In February 2013, the Financial Accounting Standards Board issued an update to Accounting Standards Codification (ASC) Topic 220 which adds new disclosure requirements for items reclassified out of AOCI. Entities must present information about significant items reclassified out of AOCI by component either on the consolidated statements of income or as a separate disclosure in the notes to the financial statements with reference to the affected line item in the consolidated statements of income. OPG applied the amendments for reporting periods beginning on January 1, 2013.

#### **Investment Companies**

For reporting periods beginning January 1, 2014, OPG adopted the updates to ASC Topic 946, *Investment Companies*. Based on the amended scope of the standard, OPG concluded that OPG Ventures Inc., the Decommissioning Fund, the Used Fuel Fund and the Ontario NFWA Trust should be treated as investment entities for accounting purposes. As the investments of these entities are already recorded at fair value, there were no measurement differences upon adoption of this update. However, additional disclosures are required in OPG's consolidated financial statements.

#### International Financial Reporting Standards (IFRS)

As a result of OPG's 2011 decision to adopt US GAAP, as required by the FAA regulation, OPG's plan to convert to IFRS, effective January 1, 2012, was discontinued. Prior to the adoption of US GAAP as the basis for OPG's financial reporting, the Company had planned to adopt IFRS effective January 1, 2012. OPG had substantively completed its IFRS conversion project, which included separate diagnostic, development, and implementation phases, when it suspended the project and began the evaluation of converting to US GAAP in the fourth quarter of 2011. OPG's IFRS conversion project involved, among other initiatives, a detailed assessment of the effects of IFRS on OPG's financial statements, an update of information systems to meet IFRS requirements as of January 1, 2011, an assessment of internal controls over financial reporting and disclosure controls and processes, as well as training

of key finance and operational staff. If a future transition to IFRS is required, conversion work can effectively be restarted with sufficient lead time to evaluate and conclude on changes that occurred subsequent to the decision to suspend the project.

During the first quarter of 2014, OPG received exemptive relief from the OSC requirements of section 3.2 of National Instrument 52-107 *Acceptable Accounting Policies and Auditing Standards*. The exemption allows OPG to file consolidated financial statements based on US GAAP without becoming a Securities and Exchange Commission registrant, or issuing public debt. The exemption will terminate on the earliest of the following:

- January 1, 2019
- the financial year that commences after OPG ceases to have activities subject to rate regulation
- the effective date prescribed by the International Accounting Standards Board for the mandatory application of a standard within IFRS specific to entities with rate-regulated activities.

This exemption replaces the exemptive relief received by OPG from the OSC in December 2011. The 2011 exemption allowed OPG to file consolidated financial statements based on US GAAP for financial years that began on or after January 1, 2012, but before January 1, 2015.

# **RISK MANAGEMENT**

# **Overview**

OPG faces various risks that could significantly impact the achievement of its strategic, operational, financial, environmental, and health and safety goals. The aim of risk management is to identify and mitigate these risks and preserve the value of the Shareholder's investment in OPG's assets.

## **Risk Governance Structure**

The Risk Oversight Committee (ROC) of the Board of Directors assists the Board to fulfill its oversight responsibilities for matters relating to identification and management of the Company's key business risks. An Executive Risk Committee (ERC), which is comprised of the business unit leaders and the Chief Risk Officer (CRO), assists the ROC in fulfilling its governance and oversight responsibilities related to OPG's risk management activities.

## **Risk Management Activities**

OPG faces a wide array of risks as a result of its business operations. The Enterprise Risk Management (ERM) framework is designed to identify and evaluate risks on the basis of their potential impact on the Company's capacity to achieve specific business plan objectives.

Risk management reporting activities are coordinated by a centralized ERM group led by the CRO. The activities begin with business units identifying, reviewing, and assessing risks that could prevent achievement of their business plan objectives. These risks are then prioritized based on their potential to impact OPG's overall business objectives. The ERM group also assesses external developments that may have implications to the corporate risk profile and facilitates the identification and assessment of emerging risks. In addition, OPG's senior executives identify broader strategic risks. OPG's senior executives then prioritize the operational, tactical and strategic risks to determine the top risks to the Company.

Senior management also sets risk limits for the financing, procurement, and trading activities of the Company and ensures that effective risk management policies and processes are in place to ensure compliance with such limits in order to maintain an appropriate balance between risk and return. OPG's ERM process facilitates the monitoring of risk management activities for identified key risks on a regular basis. This allows the ERM group to report significant developments to the ERC and the ROC quarterly.

For the purpose of disclosure, a number of key risks are presented in five main categories, namely operational, financial, regulatory, enterprise-wide, and environmental. For each category, risks are briefly described below.

## **Operational Risks**

#### Risks Associated with Existing Generating Operations

# OPG is exposed to variable output from its existing generating stations that could adversely impact its financial performance.

Operational risks are those risks normally inherent in the operation of electricity generating facilities. These risks can lead to interruptions in the operations of generating stations or uncertainty in future production. The operational risks of a station are generally a function of the age of the stations and the technology used.

#### **Nuclear Generating Stations**

Operating an aging nuclear fleet exposes OPG to unique risks such as unplanned outages, an increase in cost of operations and risks associated with nuclear waste management operations.

Operating nuclear stations exposes OPG to unique risks, such as greater-than-anticipated deterioration of station components and systems, risks associated with the nuclear industry, supply chain (vendor quality), the handling, storage, and disposal of nuclear waste, and the risk of nuclear accident. The primary impacts of these risks are additional safety requirements, and the potential derating of a generating unit. These risks could result in lower than expected generation and revenues, and higher operating costs.

The uncertainty associated with the electricity volume generated by OPG's Canadian Deuterium Uranium (CANDU) nuclear generating units is primarily driven by the condition of the station components and systems, which are all subject to the effects of aging. Fuel channels are expected to be the most life-limiting component affecting station end of life. Other significant factors identified to-date include degradation of primary heat transport pump motors and fuel channels at Darlington Nuclear GS. Additionally, there are fuel handling performance issues at both the Darlington and Pickering Nuclear generating stations. To respond to these challenges, OPG continues to implement extensive inspection and maintenance programs to monitor performance, identify corrective actions and projects required to operate reliably and within design parameters.

Deterioration of station components may progress in an unexpected manner, resulting in the need to increase monitoring, conduct extensive repairs, or undertake additional remedial measures. To maintain a safe operating margin, a nuclear unit could be derated resulting in reduced generation. When an unexpected condition first appears, a specific monitoring program is established. The primary impact of these conditions on OPG is an increase in the long-term cost of operations. The associated mitigation may create additional outage work, thus increasing the number of outages or extending planned outages.

The process of generating electricity by nuclear generating stations produces nuclear waste. As required by the CNSC, OPG is accountable for the management of used fuel and L&ILW and decommissioning of all its nuclear facilities, including the stations on lease to Bruce Power. Currently, there are no licensed facilities in Canada for the permanent disposal of nuclear used fuel or L&ILW.

To address the need for the long-term disposal of L&ILW, OPG is developing plans for a DGR. The opposition to deep geologic disposal of used fuel and L&ILW may impede the ability of OPG, its contractors, and subcontractors to develop disposal plans acceptable to major stakeholders. Similarly, prolonged on-site used fuel and L&ILW storage may be opposed. Other factors impacting the residual risk associated with nuclear waste management operations include human performance and regulatory requirements.

The NWMO has developed a process for moving forward with Adaptive Phase Management as the long-term solution for Canada's nuclear fuel waste. In the interim, OPG is storing and managing used fuel at its nuclear generating station sites.

# Pickering Continued Operations

OPG plans to continue the safe and reliable operation of the Pickering Nuclear GS until 2020, and then place these generating units in a safe storage state for eventual decommissioning. The 2013 Long-Term Energy Plan indicates an earlier shutdown of units at the Pickering Nuclear GS may be possible depending on the following factors:

- projected electricity demand going forward
- the progress of the fleet refurbishment program
- the timely completion of the Clarington Transformer Station.

Inability to achieve continued operations could result in a reduction of OPG's revenue and lead to the advancement of shutdown and station decommissioning expenditures.

Risk factors for Pickering Continued Operations include the discovery of unexpected conditions, equipment failures, and requirement for significant plant modifications. To mitigate these risks, OPG continues to undertake a number of activities which include the following:

- work on fuel channel life cycle management
- a regulatory strategy and economic analysis to support optimal reactor end of life dates
- modification of the operating and maintenance strategy to support Continued Operations.

In August 2013, the CNSC extended the operating license of Pickering Nuclear GS to August 31, 2018 subject to a regulatory hold point which required OPG to meet several conditions. This risk is being mitigated by completing the required actions to address the hold point on schedule with senior level oversight.

## Hydroelectric Generating Stations

# OPG's hydroelectric generation is exposed to risks associated with water flows, the age of plant and equipment, and dam safety.

The extent to which OPG can operate its hydroelectric generation facilities depends upon the availability of water. Significant variances in weather, including impacts of climate change, could affect water flows. OPG manages this risk by using production forecasting models that incorporate unit efficiency characteristics, water availability conditions, and outage plans. Inputs to the models are assessed, monitored and adjusted on an ongoing basis. For the currently regulated hydroelectric generation, the financial impacts of variability in electricity production due to the differences between the water conditions underpinning the hydroelectric regulated prices and actual water conditions are captured by the Hydroelectric Water Conditions Variance Account authorized by the OEB. OPG's September 2013 application to the OEB requests the extension of the variance account to include the majority of output of the newly regulated hydroelectric stations. If the request is granted by the OEB, variability in electricity production caused by water conditions for the majority of the output of the newly regulated hydroelectric stations will also be captured through the variance account.

OPG's hydroelectric generating stations vary in age and the majority of the hydroelectric generating equipment is over 50 years old. The age of the equipment and civil components creates risks to the reliability of some hydroelectric generating stations. OPG manages these reliability risks by performing inspection and maintenance of critical components. In addition, OPG conducts detailed engineering reviews and station condition assessments. The reviews and assessments help identify future work required to sustain and, if necessary, upgrade a station.

The hydroelectric business segments operate 228 dams across the Province. Dam safety legislation does not currently exist in the Province. In August 2011, the MNR published a set of Technical Guidelines following a period of

public consultation. These Technical Guidelines, which are not a regulation, represent the government standards for dam safety.

In general, OPG practices in the area of dam safety and public safety around dams exceed the minimum requirements outlined in the MNR Technical Guidelines. In addition, OPG is developing a new risk-informed approach on behalf of the MNR to prioritize the outcomes of dam safety assessments. OPG could eventually incur additional costs for certain dams that it operates in order to comply with any new requirements.

#### **Thermal Generating Stations**

Preserving the option of OPG's Nanticoke and Lambton units to run on alternate fuels will require a cost recovery mechanism. Lennox ESA may not allow recovery of all pre-established costs over the contract term.

OPG is placing the Nanticoke and Lambton units in a state to preserve the option to convert the units to natural gas and/or biomass in the future, should they be required. OPG expects to incur costs to maintain these units in this state. There is no mechanism currently in place to recover these costs.

OPG's capability to convert some units at the Lambton and Nanticoke generating stations to alternate fuels such as natural gas, biomass, or dual gas-biomass depends on obtaining appropriate cost recovery agreements with the OPA.

OPG's Lennox and Thunder Bay thermal generating stations operate as peaking facilities, depending on the characteristics of the particular stations and subject to market demand.

The Lennox ESA executed with the OPA in December 2012 provides OPG with a return and covers maintenance, overhead costs, fixed fuel costs and capital expenditures of the station for the ten-year term of the contract. However; some financial risk remains regarding recovery of actual costs over the contract term, if these costs were to exceed the assumptions of the Lennox ESA contract.

The Reliability Must Run Agreement for the Thunder Bay GS with the IESO expired on December 31, 2013. Beyond 2013, there is no mechanism in place to recover direct costs of the Thunder Bay GS while firing coal. In 2013, the Minister of Energy announced that one unit at the Thunder Bay GS will be converted to advanced biomass. The Minister directed the OPA to negotiate a five year cost recovery agreement with OPG for generation using this technology. As mandated by the Minister of Energy, OPG will cease use of coal at this station by the end of 2014.

#### Risks Associated with Major Development Projects

The risks associated with the cost, schedule, and technical aspects of the major development projects could adversely impact OPG's financial performance and its corporate reputation.

OPG is undertaking numerous capital intensive projects with significant investments. There may be an adverse effect on the Company if it is unable to: effectively manage these projects; obtain necessary approvals; raise the necessary funds; or fully recover capital costs in a timely manner. Major projects include the Darlington Refurbishment, the Lower Mattagami River project, and other hydroelectric and thermal projects, such as the conversions at the Atikokan GS and the Thunder Bay GS.

#### Darlington Refurbishment

The Darlington generating units, based on original design assumptions, are currently forecast to reach their end of life between 2019 and 2020. The refurbishment of the Darlington Nuclear GS is expected to extend its operating life by approximately 30 years. Failure to achieve the objectives of the refurbishment project may result in future forced outages and more complex planned outages, potentially impacting the post-refurbishment useful life of the station. To mitigate this risk, and as part of the project front-end planning process, a component condition assessment has been performed on all critical systems within the station. This assessment has evaluated the current condition of the

systems and identified required work to be performed during the refurbishment outages. Key life limiting components such as pressure tubes are included in the base refurbishment scope. As part of the project planning process, OPG continues to define project scope, obtain regulatory approvals and negotiate contracts, in order to reduce uncertainty associated with the refurbishment cost and schedule. OPG also continues to work with its Shareholder to determine an appropriate cost recovery mechanism in connection with the project, while considering the impact to electricity consumers.

# Lower Mattagami

Work on the Lower Mattagami River project has progressed well and each of the sites is expected to be brought into service on or ahead of the target completion date . Key risks to meeting objectives include legal challenges or blockades by groups opposed to various aspects of the project, and quality issues with equipment and materials causing delays during commissioning. These risks are managed through selection of an experienced contractor to construct the project, maintaining strong working relationships with project stakeholders, and implementing a rigorous quality and commissioning management program.

## Other Development Projects

Projects that are in the initial development stages are subject to schedule delays or possible cancellation due to unforeseen delays in receiving permits or approvals, which may involve various external stakeholders. OPG attempts to mitigate these risks through early involvement and regular communication with applicable government agencies, close consultation with external stakeholders, and ongoing monitoring of contractor performance relative to permits.

These projects could also be faced with increasing costs for equipment and construction that could impact their economic viability. OPG continuously monitors such trends in costs in order to keep abreast of emerging issues. OPG seeks to manage and limit cost increases through contracting strategies, where possible.

# **Financial Risks**

# OPG is exposed to a number of discrete market-related risks that could adversely impact its financial and operating performance.

OPG is exposed to a number of financial risks, many of which arise due to OPG's exposure to volatility in commodity, equity and foreign exchange markets, and interest rate movements. Pension and OPEB costs would also be impacted by these market and interest rate movements. OPG manages this complex array of risks to reduce the uncertainty or mitigate the potential unfavourable impact on the Company's financial results.

## Commodity Markets

Changes in the market price of electricity or of the fuels used to produce electricity can adversely impact OPG's earnings and cash flow from operations.

To manage the risk of unpredictable increases in the price of fuels, the Company has fuel hedging programs, which include using fixed price and indexed contracts.

OPG's revenue from its unregulated assets is also affected by changes in the market or spot price of electricity. The majority of this exposure will cease to exist with the implementation of a regulated price for most of OPG's currently unregulated hydroelectric facilities, which have been prescribed for rate regulation by the OEB, effective July 1, 2014. Over the first half of 2014, a \$1/MWh change in the expected spot market price of electricity would impact OPG's unregulated revenue by approximately \$7 million.

The percentage of OPG's expected generation, fuel requirements and emission requirements hedged are shown below:

	2014	2015	2016
Estimated generation output hedged	90%	98%	100%
Estimated fuel requirements hedged <sup>2</sup>	80%	68%	64%
Estimated nitric oxide (NO) emission requirement <sup>3</sup>	100%	100%	100%
Estimated SO <sub>2</sub> emission requirement hedged <sup>3</sup>	100%	100%	100%

<sup>1</sup> Represents the portion of megawatt-hours of: expected future generation production which is subject to regulated prices established by the OEB; agreements with the IESO, OEFC, and OPA; or other electricity contracts which are used as hedges.

<sup>2</sup> Represents the approximate portion of megawatt-hours of expected generation production (and year-end inventory targets) from each type of facility (nuclear and thermal) for which OPG has entered into contractual arrangements or obligations in order to secure the price of fuel. Excess fuel in inventories in a given year is attributed to the next year for the purpose of measuring hedge ratios.

<sup>3</sup> Represents the approximate portion of megawatt-hours of expected thermal production for which OPG has purchased, been allocated or granted emission allowances, and Emission Reduction Credits to meet OPG's obligations under Ontario Environmental Regulations 397/01.

## **Financial Markets**

The market value of investments held by OPG's Nuclear Funds and the OPG registered pension plan could be significantly affected by changes in various market factors such as equity prices, interest rates, inflation, and commodity prices.

# Nuclear Funds Market Risk

The Decommissioning Fund and the Used Fuel Fund contain investment allocations to certain asset classes including fixed income securities, domestic and international equity securities, pooled funds, infrastructure, and Canadian real estate. These funds are managed with the objective of generating sufficient returns over time to meet the associated nuclear waste and decommissioning obligations. The rates of return earned on these segregated funds are subject to various factors including the current and future financial markets conditions, which are inherently uncertain.

For the Used Fuel Fund, the Province guarantees the annual rate of return at 3.25 percent plus the change in the Ontario CPI for the first 2.23 million fuel bundles. A change in the value of the fund, as a result of changes in capital markets related to the first 2.23 million bundles, does not impact OPG's earnings. Unlike contributions subject to the Province's rate of return guarantee, OPG assumes the market risk for investment of funds set aside for incremental bundles.

The performance of the Nuclear Funds related to stations leased to Bruce Power is subject to the Bruce Lease Net Revenues Variance Account established by the OEB. The variance account partially mitigates market risk related to the Nuclear Funds as it captures the differences between actual and forecast earnings from the Nuclear Funds as they relate to the nuclear generating stations leased to Bruce Power. Forecast earnings refer to those approved by the OEB in setting regulated nuclear prices.

Residual risk to OPG's financial results continues to exist due to volatility in the financial and commodity markets, especially risk that affects the Nuclear Funds.

# Post-Employment Benefit Obligations

OPG's post-employment benefit obligations include pension, group life insurance, health care, and LTD benefits. OPG's post-employment benefit obligations and costs, and OPG's pension contributions could be materially affected in the future by numerous factors, including: changes in actuarial assumptions such as changes to discount rates; future investment returns; experience gains and losses; the current funded status of the pension plans; changes in benefits; changes in the regulatory environment including potential changes to the *Pension Benefits Act* (Ontario); divestitures; and the measurement uncertainty incorporated into the actuarial valuation process. The OPG registered pension plan, which covers most employees and retirees, is a contributory defined benefit plan that is indexed to inflation. Contributions to the OPG registered pension plan are determined by actuarial valuations, which are filed with the appropriate regulatory authorities at least every three years. The most recent actuarial valuation of the OPG registered pension plan was completed as of January 1, 2011. Based on the actuarial valuation, in addition to its minimum required contribution, OPG may also include voluntary contributions towards the deficit in the registered pension plan. OPG will continue to assess the requirements for contributions to the registered pension plan. The next actuarial valuation of the OPG registered plan must have an actuarial valuation date no later than January 1, 2014, and must be filed by September 30, 2014. There is a risk that OPG's contribution to the registered pension plan could increase significantly as a result of the 2014 actuarial valuation. OPG's OPEB obligations are not funded and the associated employee benefits are paid from cash flow provided by operating activities.

# Foreign Exchange and Interest Rate Markets

# OPG's earnings and cash flows can be affected by movements in the United States dollar relative to the Canadian dollar and by prevailing interest rates on its borrowings and investment programs.

OPG's financial results are exposed to volatility in the Canadian/US foreign exchange rate as fuels and certain supplies and services purchased for generating stations are primarily denominated in US dollars (USD). In addition, the market price of electricity in Ontario is influenced by the exchange rate because of the interaction between the Ontario and neighbouring US interconnected electricity markets. The Ontario electricity spot market is also influenced by USD denominated commodity prices for natural gas which is used in electricity generation. To manage this risk, OPG employs various financial instruments such as forwards and other derivative contracts, in accordance with approved risk management policies. As at December 31, 2013, OPG had total foreign exchange contracts outstanding with a notional value of USD \$36 million.

The majority of OPG's existing debt is at fixed interest rates. Interest rate risk arises with the need to refinance existing debt and/or undertake new financing. The management of these risks is undertaken by using derivatives to hedge the exposure in accordance with corporate risk management policies. OPG periodically uses interest rate swap agreements to mitigate elements of interest rate risk exposure associated with anticipated new financing. As at December 31, 2013, OPG had interest rate swap contracts outstanding for hedging interest rate risk with a notional principal of \$100 million.

# Trading

# OPG's financial performance can be affected by its trading activities.

OPG's trading operations are closely monitored and total exposures are measured and reported to senior management on a daily basis. One of the metrics used to measure the financial risk of this trading activity is known as "Value at Risk" or "VaR". VaR is defined as a probabilistic maximum potential future loss expressed in monetary terms for a portfolio based on normal market conditions over a set period of time. During 2013, the VaR utilization ranged between nil and \$1 million compared to nil and \$0.5 million for 2012.

## <u>Credit</u>

# Deterioration in counterparty credit and non-performance by suppliers and contractors can adversely impact OPG's earnings and cash flows from operations.

The Company's credit risk exposure is a function of its electricity sales, trading and hedging activities, treasury activities including investing, and commercial transactions with various suppliers of goods and services. OPG's credit risk exposure relating to electricity sales is considered low as the majority of sales are through the IESO-administered spot market. The IESO oversees the credit worthiness of all market participants.

Other major components of credit risk exposure include those associated with vendors that are contracted to provide services or products. OPG manages its exposure to various suppliers or counterparties by evaluating their financial condition and ensuring that appropriate collateral or other forms of security are held by OPG.

The following table summarizes OPG's credit exposure to all counterparties from electricity transactions and trading December 31, 2013:

			Potential Exposure for Largest Counterparties		
	Number of	Potential	Counterpart		
Credit Rating <sup>1</sup>	Counterparties <sup>2</sup>	Exposure <sup>3</sup> (million of dollars)	Counterparties	Exposure (million of dollars)	
Investment grade	23	29	4	24	
Below investment grade	5	2	1	2	
IESO <sup>4</sup>	1	347	1	347	
Total	29	378	6	373	

Credit ratings are based on OPG's own analysis, taking into consideration external rating agency analysis where available, as well as recognizing explicit credit support provided through parental guarantees, Letters of Credit or other forms of security.

<sup>2</sup> OPG's counterparties are defined on the basis of individual master agreements.

<sup>3</sup> Potential exposure is OPG's statistical assessment of maximum exposure over the life of each transaction at a 95 percent confidence interval.

<sup>4</sup> Credit exposure to the IESO peaked at \$648 million during 2013. The credit exposure and associated receivable vary each month based on electricity sales. The monthly receivable from the IESO is typically paid to OPG in the subsequent month as per the IESO payment schedule.

# Liquidity

## Rising liquidity requirements can impact OPG's capital investment projects.

OPG operates in a capital intensive business. Significant financial resources are required to fund capital improvement projects. In addition, the Company has other significant disbursement requirements including investment in new generating capacity, annual funding obligations under the ONFA, pension contributions, payments towards OPEB and other benefit plans, and debt maturities with the OEFC. OPG must ensure it has the financial capacity and sufficient access to cost-effective financing sources to fund its capital requirements. A discussion of corporate liquidity is included under the heading, *Liquidity and Capital Resources*.

## Nuclear Waste and Decommissioning Obligations and Nuclear Funds

The cost estimates of nuclear waste obligations are based on assumptions that evolve over time and could impact OPG's contributions to the Nuclear Funds to cover these costs.

As required by the CNSC, OPG is responsible for the management of used nuclear fuel and L&ILW, and eventual decommissioning of all of its nuclear facilities, including the stations on lease to Bruce Power. OPG is required by various rules and regulations to provide cost estimates associated with its nuclear waste management and decommissioning obligations. These cost estimates are based on numerous underlying assumptions that are inherently uncertain, including station end of life dates and waste volumes. Increased cost estimates for the nuclear waste and decommissioning obligation, or a change in OPG's decommissioning strategy could increase OPG's contributions to the Nuclear Funds under the ONFA reference plan updates. To address the inherent uncertainty, OPG undertakes to review the underlying assumptions and baseline cost estimates at least once every five years. Certain underlying assumptions, such as station end of life dates and forecast for nuclear waste volumes, are reviewed annually, with resulting changes assessed for their impact to the liability. Changing business decisions, such as refurbishment decisions and premature unit closures, are reviewed as they occur and OPG uses the existing baseline cost information to estimate the impacts to the nuclear liability balance. Should changing circumstances be

assessed as material or significant, an early re-assessment of baseline costs could be performed before the five-year period is completed.

OPG's contributions to the Nuclear Funds are determined by ONFA reference plans, which are required to be updated at least every five years. The changes in contribution levels are determined based upon changes in the values of the Nuclear Funds as well as associated nuclear waste and decommissioning obligations. For the purposes of ONFA reference plan updates, the value of the Nuclear Funds is measured at a point in time. At such times, decreased values of the Nuclear Funds could increase OPG's required contributions under the ONFA.

## **Regulatory and Legislative Risks**

OPG is subject to extensive federal and provincial legislation and regulations that have an impact on OPG's operations and financial position.

OPG is subject to regulation by various entities including the OEB and the CNSC. The risks that arise from being a regulated entity include: the potential inability to receive full recovery of capital and operating costs; reductions in earnings; and increases in operating costs. These unfavourable impacts are mitigated by maintaining close contact with regulators and other authoritative bodies to ensure early identification and discussion of issues.

## Rate Regulation

Significant uncertainties remain regarding the outcome of rate proceedings, which determine the regulated prices for OPG's rate regulated operations.

The prices for electricity generated from the prescribed facilities are determined by the OEB, currently on a forecast cost of service methodology. As with any regulated price established using this methodology, there is an inherent risk that the prices established by the regulator may not provide for recovery of all actual costs incurred by the regulated operations, or may not allow the regulated operations to earn the appropriate rate of return.

In September 2013, OPG filed a cost of service application for new regulated prices for the currently regulated facilities and the currently unregulated hydroelectric facilities, which have been prescribed for rate regulation, effective July 1, 2014, for 2014 and 2015. There is a considerable level of inherent uncertainty regarding the outcome of this proceeding, which is expected to consider a number of significant matters including the Niagara Tunnel project, OPG's Business Transformation initiative, compensation costs, the refurbishment of Darlington GS, and the inclusion of 48 additional regulated hydroelectric facilities in the scope of regulation. For further details on the application, refer to the disclosure under the heading, *Recent Developments*.

## Legislative Risks

OPG is subject to extensive federal and provincial legislation and regulations that have an impact on OPG's operations and financial position.

OPG continues to monitor and actively engage with the provincial and federal governments in order to determine if future legislation will impact its business.

The 2013 Long-Term Energy Plan was released by the Province on December 2, 2013. The document is supportive of several proposed OPG initiatives and projects. A discussion of the 2013 Long-Term Energy Plan can be found under the heading, *Ontario's Long-Term Energy Plan* in the *Recent Developments* section of this MD&A.

#### Nuclear Regulatory Requirements

# An aging nuclear fleet or changes in technical codes or laws may increase the risk of additional nuclear regulatory requirements.

The uncertainty associated with nuclear regulatory requirements is primarily driven by plant aging, technology risks, and changes to technical codes. Addressing these requirements could add to the cost of operations, and in some instances, may result in a reduction or elimination of the productive capacity of a station, or in an earlier than planned replacement of a station component. Additionally, the operations of nuclear stations are often directly impacted by circumstances or events that occur at other nuclear stations across the globe. These circumstances or events may lead to CNSC regulatory changes with a significant impact on the cost and future operation of OPG's nuclear fleet.

In January 2014, the federal government introduced Bill C-22 which contains a new *Nuclear Liability and Compensation Act*. When passed, Bill C-22 will increase the nuclear liability limit from \$75 million to an initial \$650 million, with successive annual increases to \$750 million, \$850 million and finally to \$1 billion.

#### **Enterprise-Wide Risks**

OPG's business prospects could be adversely affected by various enterprise-wide risks such as electricity demand and supply, human resources, health and safety, and corporate reputation. Significant risks that could have a potential enterprise-wide impact on OPG's business, reputation, financial condition, operating results and prospects are discussed below.

#### **Ontario Electricity Market**

#### Ontario electricity market conditions could impact OPG's revenue and operations.

OPG's generation and market share continues to be impacted by many external factors including: the entrance of new participants in the Ontario market; the competitive actions of market participants; Ontario electricity demand; regulated electricity prices; changes in the regulatory environment; wholesale electricity prices in the interconnected markets; and Ontario's aggregate transmission system export capability.

SBG has, and will continue to be, an issue as new generation comes into service, while demand has either decreased or not grown at the same rate as capacity additions. For OPG, SBG can cause hydroelectric spill, reductions in generation from nuclear facilities, and add to wear and tear of station equipment due to increased dispatch.

To manage SBG conditions, the IESO dispatches units based on their offers and when the units become uneconomic it may require OPG to reduce hydroelectric generation and spill water and/or reduce generation output of nuclear units. The Hydroelectric SBG Variance Account authorized by the OEB may mitigate the financial impact of currently regulated hydroelectric spill due to SBG conditions. There is currently no similar mechanism for the recovery of losses due to SBG conditions affecting OPG's unregulated hydroelectric SBG Variance Account to include the majority of the output of the newly regulated hydroelectric stations. If authorized by the OEB, the account may also mitigate the financial impact of spills due to SBG conditions for hydroelectric stations that have been prescribed for rate regulation, effective July 1, 2014.

The structure of the Ontario electricity market is subject to regulation and market rules, changes to which may affect OPG's revenue. The sole Shareholder, the IESO, OEB, or other regulatory body may change or institute regulations or rules which can impact OPG's capability to generate revenue or ability to recover appropriate costs.

Filed: 2016-05-27 EB-2016-0152 Exhibit A2-1-1 Attachment 1 Page 69 of 152

### People and Culture

### OPG's financial position could be affected if skilled human resources are not available or aligned with its operations.

The development of new leaders and retention of staff in critical roles across OPG is a key factor to OPG's success. Another success factor is related to the effective transfer of knowledge from those in critical positions throughout OPG to future leaders. The risk associated with the alignment and/or availability of skilled and experienced resources continues to exist for OPG in specific areas, including leadership and project management positions. In addition, OPG's Business Transformation process is expected to result in the reduction of approximately 2,330 employees for the period January 1, 2011 to December 31, 2016 from ongoing operations.

There is also a risk of a mismatch between attrition levels and the resource requirements to meet OPG's future demands. To mitigate the impact of this risk, OPG has embarked upon an organization-wide workforce planning effort and has established ongoing monitoring processes to re-assess risks, issues and opportunities related to staffing on a regular basis. OPG also continues to focus on succession planning, leadership development, and knowledge retention programs to improve the capability of its workforce. OPG expects to meet the human resource needs of the business by leveraging attrition through realigning work and streamlining processes.

As of December 31, 2013, approximately 89 percent of OPG's regular labour force was represented by a union. OPG's collective agreement with the PWU runs through March 31, 2015. The collective agreement between OPG and The Society expires on December 31, 2015.

In addition to the regular workforce, construction work is performed through 20 craft unions with established bargaining rights on OPG facilities.

During the second quarter of 2012, legislation associated with the Ontario Provincial budget included measures that affect OPG, such as public sector pension reform, and compensation restraints for executives until Ontario ceases to have a budget deficit. These changes may adversely affect OPG's ability to retain or attract qualified employees, including those at the executive level, and may ultimately affect OPG's operations.

### Health and Safety

### OPG's safety management and risk control program is designed to effectively manage safety risks in high risk areas.

OPG's operations involve inherent occupational safety risks and hazards. The Company is committed to achieving its goal of zero injuries and continuous improvement through maintenance of a formal safety management system at the corporate level which is integrated at the site levels. This system serves to focus OPG on proactively managing safety risks and hazard exposures to employees and contractors.

### **Corporate Reputation**

OPG is exposed to reputational risk associated with changes in the opinion of various stakeholders regarding its public profile. OPG undertakes various assurance and risk management activities to manage risks to its corporate reputation.

As a provider of a large portion of the Province's electricity requirements, maintaining a positive corporate reputation is critical for OPG. OPG focuses on building and maintaining its reputation through many practices, including corporate citizenship initiatives across the Province, appropriate and transparent governance practices, and effective communication with stakeholders. In addition, OPG undertakes continuous improvement initiatives in various assurance and risk management activities. Issue management and response plans are developed to address specific reputational issues as they arise.

### Transmission and Interconnection Systems

OPG could face transmission constraints, which could impact its operations and ability to supply electricity to the Ontario electricity markets.

OPG depends on the capacity and reliability of the Ontario transmission system that connect its generators to the Ontario grid and ultimately with customers in Ontario. In Ontario, the capacity of such transmission systems is limited under certain conditions and the OEB's approval is required for system expansion.

Ontario may also face transmission constraints into or due to interconnected markets and its ability to import and /or export power. The capacity and operating reliability of such interconnection, transmission, and distribution systems are factors which may impact the IESO dispatch in Ontario thereby potentially affecting OPG's capability to supply the Ontario grid. This could result in a significant loss in generation revenues and increased costs.

### Ownership by the Province

OPG's commitment to maximize the return on the Shareholder's investment in OPG's assets may compete with the obligation of the Shareholder to respond to a broad range of matters.

The Province owns all of OPG's issued and outstanding common shares. Accordingly, the Province determines the composition of the OPG's Board of Directors and can directly influence major decisions including those related to project development, timing and strategy of the applications for regulated prices, asset divestitures, financing, and capital structure. OPG could be subject to Shareholder directions that require OPG to undertake activities that result in increased expenditures, or that reduce revenues or earnings, relative to the business activities or strategies that would have otherwise been undertaken. In addition, OPG's corporate interests and the wider interests of the Province may compete as a result of the obligation of the Province to respond to a broad range of matters affecting OPG's business environment.

### Information Technology

OPG's ability to operate effectively is in part dependent on effectively managing its Information Technology (IT) requirements. IT system failures may have an adverse impact on OPG.

OPG's ability to operate effectively is in part dependent upon developing or subcontracting and managing a complex IT systems infrastructure. Failure to meet IT requirements, effectively deal with cyber security threats, and manage system changes and conversions could result in future system failures, or an inability to align IT systems to support the business. In addition, OPG could be exposed to operational risks, reputational damage and/or financial losses in the event of IT security breaches. To mitigate these risks, OPG closely monitors its IT systems and service requirements as well as changes in its operating environment.

### **Suppliers**

Non-performance by strategic suppliers or an inability to diversify the supplier base could adversely impact the financial results and reputation of OPG.

OPG's ability to operate effectively is in part dependent upon access to equipment, materials, and service suppliers. Loss of key equipment, materials, and service suppliers, particularly for the nuclear business, could affect OPG's ability to operate effectively. OPG mitigates this risk to the extent possible through effective contract negotiations, contract language, vendor monitoring, and diversification of its supplier base.

### Interconnected Electricity Markets

### OPG is one of many market participants that trades competitively in the interconnected markets.

OPG competes in interconnected electricity markets while taking into account many external factors, including: the cost to transmit electricity to these markets; the price of electricity in these markets; the competitive actions of other generators and power marketers; the state of deregulation in Ontario and the interconnected markets; currency exchange rates; new trade limitations; and costs to comply with environmental standards imposed in these markets. OPG's trading subsidiary OPG Energy Trading retains a Federal Energy Regulatory Commission licence.

### Leases, Partnerships and Subsidiaries

### OPG's financial performance could be affected if the risks associated with its leases and partnerships materialize.

OPG has leased its Bruce nuclear generating stations to Bruce Power and is a party to a number of partnerships related to the ownership and operation of generating stations.

Under the Bruce Lease, lease revenue is reduced in each calendar year where the Average HOEP falls below \$30/MWh and certain other conditions are met. The conditional reduction to revenue in the future, embedded in the terms of the Bruce Lease, is treated as a derivative. Derivatives are measured at fair value and changes in fair value are recognized in the consolidated statements of income.

For 2013, the annual Average HOEP dropped below \$30/MWh and as a result OPG is refunding a lease payment of \$79 million to Bruce Power in 2014. In addition, as a result of an expected decrease in future annual Average HOEP, the fair value of the derivative liability increased by \$33 million during 2013. The derivative liability was \$346 million at December 31, 2013, compared to \$392 million at December 31, 2012. The expected decrease in future annual Average HOEP is an annual exposure which will continue until the Bruce units that are subject to this mechanism are no longer in operation, specific units are refurbished, or when the lease agreement is terminated. This exposure is mitigated as part of the OEB regulatory process, since the revenue from the lease of the Bruce generating stations is included in the determination of nuclear regulated prices and is subject to the Bruce Lease Net Revenues Variance Account.

A subsidiary to OPG, CNP, was created to provide management and technical service expertise in the areas of the nuclear, hydroelectric and thermal electricity generation business. CNP relies on the expertise from OPG to offer its services.

OPG operated, jointly controlled, and leased facilities are subject to numerous operational, financial, regulatory, and environmental risk factors.

### **Business Continuity and Emergency Management**

Natural, technological, or human-caused hazards may impact OPG's business continuity.

OPG is also exposed to potential or actual incidents or developments resulting from natural, technological, or humancaused hazards that could threaten the continuity of OPG's business operations. OPG may be exposed to a significant event against which it is not fully insured or indemnified, or to a party that fails to meet its indemnification obligations.

OPG's Business Continuity program provides a framework to build resilience into critical business processes by facilitating development of risk response plans and business continuity exercises. OPG's Emergency Management program ensures that the corporation can manage an emergency in a timely and effective manner. OPG's plan and various implementing procedures identify immediate response actions that will be taken to protect the health and safety of employees, the public, and to limit the impact of the crisis on site security, production capability, and the environment. The program elements are designed to meet legal and regulatory requirements. The goals of both the

programs are to protect the health and safety of employees, the public and responders, the environment, and OPG's assets and reputation.

### First Nations and Métis Communities

The outcome of negotiations with the First Nations and Métis communities in Ontario depends on many factors such as legislation and precedents created by court rulings.

OPG may be subject to claims by First Nations and Métis communities. These claims stem from projects and generation development related to the historic operations of Ontario Hydro that may have impacted First Nations and Métis title or rights. Precedents created by court rulings also impact negotiations and resolution of past grievances.

OPG has a First Nations and Métis Relations Policy, which sets out its commitment to build and maintain positive relationships with the First Nations and Métis communities. OPG has been successful in resolving some past grievances. However, the outcome of the ongoing and future negotiations with the First Nations and Métis communities depends on a number of factors, including legislation and regulations, which are subject to change over time.

### **Environmental Risks**

OPG may be subject to fines, penalties, and claims, if it is not in compliance with the applicable environmental laws. Changes in environmental regulations can result in existing operations being in a state of non-compliance, a potential inability to comply, potential liabilities, and costs for OPG.

Changes to environmental laws could create compliance risks and result in potential liabilities that may be addressed by the installation of control technologies, the purchase of emission reduction credits, allowances or offsets, or by constraining electricity production. Further, some of OPG's activities have the potential to impair natural habitat, damage aquatic or terrestrial plant and wildlife, or cause contamination to land or water that may require remediation. In addition, a failure to comply with applicable environmental laws may result in enforcement actions, including the potential for orders or charges.

OPG is required to comply with the Standards and Guidelines for Conservation of Provincial Heritage Properties which came into effect in July 2010. OPG is required to implement a heritage conservation program and certain generating stations and assets could be identified as heritage properties. As such, the Company may be required to incur costs to meet the requirements of the *Ontario Heritage Act*.

### **RELATED PARTY TRANSACTIONS**

Given that the Province owns all of the shares of OPG, related parties include the Province, Infrastructure Ontario, OPA and the other successor entities of Ontario Hydro, including Hydro One Inc. (Hydro One), the IESO, and the OEFC, and jointly controlled entities. The transactions between OPG and related parties are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties.

These transactions for the years ended December 31 are summarized below:

	Revenue	Expenses	Revenue	Expenses
(millions of dollars)	20	13	2012	
Hydro One				
Electricity sales	15	-	10	-
Services	-	14	-	14
Province of Ontario				
Gross revenue charge, water rentals and land tax	-	124	-	118
Guarantee fee	-	8	-	8
Used Fuel Fund rate of return guarantee	-	755	-	282
Decommissioning Fund excess funding	-	560	-	64
Pension benefits guarantee fee	-	1	-	2
OEFC				
Gross revenue charge and proxy property tax	-	208	-	201
Interest expense on long-term notes	-	187	-	189
Capital tax	-	1	-	(3)
Income taxes, net of investment tax credits	-	28	-	77
Contingency support agreement	360	-	283	-
Infrastructure Ontario				
Reimbursement of expenses incurred during the procurement process for new nuclear units		-	-	(1)
IESO				
Electricity sales	3,754	62	3,823	34
Ancillary services	125	-	56	-
OPA	136		92	-
	4,390	1,948	4,264	985

(millions of dollars)	2013	2012
Receivables from related parties		
Hydro One	2	3
IESO	317	337
OEFC	67	84
OPA	14	16
PEC	2	2
Accounts payable and accrued charges		
Hydro One	3	2
OEFC	51	51
Province of Ontario	2	3

The balances, as at December 31, between OPG and its related parties are summarized below:

### CORPORATE GOVERNANCE AND AUDIT AND FINANCE COMMITTEE INFORMATION

Disclosures related to Corporate Governance and Audit and Finance Committee Information are included in OPG's 2013 Annual Information Form.

### INTERNAL CONTROLS OVER FINANCIAL REPORTING AND DISCLOSURE CONTROLS

Management, including the President and Chief Executive Officer (President and CEO) and the Chief Financial Officer, are responsible for maintaining Disclosure Controls and Procedures (DC&P) and Internal Controls over Financial Reporting (ICOFR). DC&P is designed to provide reasonable assurance that all relevant information is gathered and reported to senior management, including the President and CEO and the Chief Financial Officer, on a timely basis so that appropriate decisions can be made regarding public disclosure. ICOFR is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the financial statements in accordance with US GAAP.

An evaluation of the effectiveness of design and operation of OPG's DC&P and ICOFR was conducted as of December 31, 2013. Management, including the President and CEO and the Chief Financial Officer, concluded that, as of December 31, 2013, OPG's DC&P and ICOFR (as defined in National Instrument 52-109 – *Certification of Disclosure in Issuers' Annual and Interim Filings, of the Canadian Securities Administrators*) were effective.

There were no material changes in OPG's ICOFR for the most recent interim period that have materially affected or are reasonably likely to materially affect OPG's ICOFR.

### FOURTH QUARTER

### **Discussion of Results**

	Three Months Ended December 31	
(millions of dollars) (unaudited)	2013	2012
Regulated generation sales	801	821
Spot market sales	87	106
Variance accounts	37	272
Other	249	(4)
Revenue	1,174	1,195
Fuel expense	<b>Í</b> 176	207
Variance accounts	(9)	(8)
Total fuel expense	167	199
Gross margin	1,007	996
Operations, maintenance and administration	720	734
Depreciation and amortization	236	169
Accretion on fixed asset removal and nuclear waste management liabilities	189	181
Earnings on nuclear fixed asset removal and nuclear waste management funds	(166)	(170)
Restructuring	2	-
Property and capital taxes	10	7
Income before other income, interest, and income taxes	16	75
Other income	(7)	-
Income before interest and income taxes	23	75
Net interest expense	23	28
Income before income taxes	-	47
Income tax (recovery) expense	(4)	16
Net income	4	31

Net income decreased by \$27 million during the fourth quarter of 2013, compared to the same quarter in 2012. The following summarizes the significant items which caused the variance in net income:

Significant factors that reduced income before other income, interest and income taxes:

• decrease in gross margin of \$67 million due to lower nuclear generation of 1.3 TWh.

Significant factors that increased income before other income, interest and income taxes:

- higher earnings of \$25 million from the Unregulated Thermal segment, excluding the impact of other income and restructuring expense, primarily as a result of higher contract revenue
- higher gross margin of \$13 million from the hydroelectric segments due to higher generation volume.

### Nuclear Funds Earnings

Earnings from the Nuclear Funds for the three months ended December 31, 2013 were \$166 million. This was slightly lower than \$170 million for the same quarter in 2012. The decrease of \$4 million mainly resulted from an adjustment to recognize the overfunded status of the Decommissioning Fund, net of the increased earnings from Used Fuel Fund and the impact of the Bruce Lease Net Revenues Variance Account.

### Other income

Other income increased by \$7 million during the fourth quarter of 2013, compared to the same period in 2012. The primary reason for the increase was the recognition of a \$9 million loss in 2012 related to the write-off of costs for the Thunder Bay gas conversion project.

### Income Taxes

Income tax recovery for the fourth quarter of 2013 was \$4 million, compared to income tax expense of \$16 million for 2012. The decrease in income tax expense was primarily due to a reduction in income before income taxes in the fourth quarter of 2013 and lower income tax components of regulatory assets for variance and deferral accounts.

### Average Sales Prices and Average Revenue

The average sales prices and average revenue were as follows:

	Three Months Ended December 31		
<u>(</u> ¢/kWh)	2013	2012	
Weighted average HOEP	2.3	2.5	
Regulated – Nuclear Generation <sup>1</sup> Regulated – Hydroelectric <sup>1</sup>	5.7	5.6	
Regulated – Hydroelectric <sup>1</sup>	4.0	3.5	
Unregulated – Hydroelectric <sup>1</sup>	2.5	2.6	
Unregulated – Thermal <sup>1</sup>	-	2.2	
Average revenue for OPG <sup>2</sup>	5.6	5.3	
Average revenue for all electricity generators, excluding OPG <sup>3</sup>	9.8	8.4	

<sup>1</sup> Average sales prices are computed as net generation sales or spot market sales divided by net generation volume.

<sup>2</sup> Average revenue for OPG is comprised of regulated revenues, market based revenues, and other energy revenues primarily from agreements for the Nanticoke, Lambton, Thunder Bay, and Lennox generating stations, and revenue from hydroelectric ESAs.

<sup>3</sup> Revenues for other electricity generators are calculated as the sum of hourly Ontario demand multiplied by the HOEP, plus total global adjustment payments, plus the sum of hourly net exports multiplied by the HOEP, less OPG's generation revenue.

The increase in the average sales prices for OPG's regulated segments during the fourth quarter of 2013 was a result of the OEB's approval of new rate riders, effective January 1, 2013. Average sales prices for OPG's unregulated generation segments decreased during the fourth quarter of 2013 largely due to a decrease in the HOEP.

### **Electricity Generation**

OPG's electricity generation for the three months was as follows:

	Three Months Ended December 31		
(TWh)	2013	2012	
Regulated – Nuclear Generation	10.7	12.0	
Regulated – Hydroelectric	4.8	4.4	
Unregulated – Hydroelectric	3.6	3.2	
Unregulated – Thermal	0.2	1.0	
Total OPG electricity generation	19.3	20.6	
Total electricity generation by all other generators in Ontario	19.8	17.3	

The decrease in electricity generation of 1.3 TWh during the fourth quarter of 2013 was primarily due to lower electricity generation from the Regulated – Nuclear Generation and the Unregulated – Thermal segments. Reduced generation in these segments was partially offset by higher hydroelectric generation. Increased planned outage days in the nuclear segment and ceased operation of the remaining coal-fired units at the Lambton GS and Nanticoke GS were the drivers for lower generation.

Ontario's primary demand was 35.6 TWh in during the fourth quarter of 2013. This was up slightly from 34.8 TWh during the fourth quarter of 2012.

### Liquidity and Capital Resources

Cash flow provided by operating activities during the three months ended December 31, 2013 was \$191 million, compared to \$154 million for the same period in 2012. The increase in cash flow was primarily due to higher cash receipts from generation revenue during the fourth quarter of 2013.

Cash flow used in investing activities during the three months ended December 31, 2013 was \$400 million, compared to \$415 million during the same period in 2012. The slight decrease was mainly due to lower capital expenditures for the Niagara Tunnel project and the Lower Mattagami River project during the fourth quarter of 2013. The decrease was partially offset by higher capital expenditures for the Darlington Refurbishment project.

Cash flow provided by financing activities during the three months ended December 31, 2013 was \$20 million, compared to \$83 million for the same period in 2012. The decrease in cash flow was primarily due to a smaller amount of debt issued for the Lower Mattagami River project during the fourth quarter of 2013.

### QUARTERLY FINANCIAL HIGHLIGHTS

The following tables set out selected financial information from OPG's unaudited interim consolidated financial statements for each of the eight most recently completed quarters. This financial information has been prepared in accordance with US GAAP.

(millions of dollars)	2013 Quarters Ended				
(unaudited)	December 31	September 30	June 30	March 31	Total
Revenue	1,174	1,244	1,190	1,255	4,863
Net income	4	30	73	28	135
Net income per share (dollars)	\$0.02	\$0.12	\$0.28	\$0.11	\$0.53

(millions of dollars) (unaudited)		201	2 Quarters End	ded	
	December 31	September 30	June 30	March 31	Total
Revenue	1,195	1,213	1,125	1,199	4,732
Net income	31	139	43	154	367
Net income per share (dollars)	\$0.12	\$0.54	\$0.17	\$0.60	\$1.43

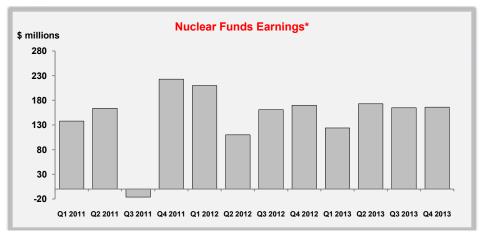
(millions of dollars) (unaudited)	December 31 (adjusted)	September 30 (adjusted)	June 30 (adjusted)	March 31 (adjusted)	Total (adjusted)
Revenue	1,228	1,250	1,202	1,284	4,964
Net income (loss)	230	(154)	109	153	338
Net income (loss) per share (dollars)	\$0.90	\$(0.61)	\$0.43	\$0.60	\$1.32

### Balance Sheet as at December 31

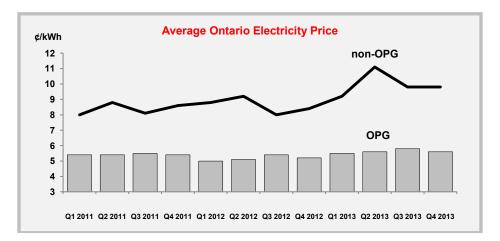
(millions of dollars)	2013	2012	<b>2011</b> (adjusted)
Total assets Total long-term liabilities Common shares outstanding (millions)	38,091 28,652 256.3	37,601 28,789 256.3	34,443 25,387 256.3

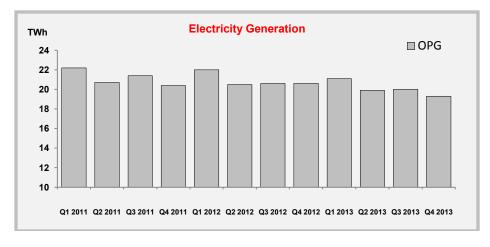
### Trends

OPG's quarterly results are affected by changes in demand primarily resulting from variations in seasonal weather conditions. Historically, OPG's revenues are higher in the first quarter of a fiscal year as a result of winter heating demands, and in the third quarter due to air conditioning and cooling demands.



<sup>\*</sup>net of regulatory variance account





Additional items which affected net income (loss) in certain quarters above are described below:

- an increase in pension and OPEB costs in 2011. This was largely a result of lower discount rates in 2011
- a decrease in revenue during the first quarter of 2011. This was mainly due to lower revenue recognized related to the energy supply contract for the Lennox GS and a decrease in thermal generation revenue. The decrease in revenue was partially offset by higher revenue related to a Contingency Support Agreement established with the OEFC for the Nanticoke and Lambton coal-fired generating stations and higher nuclear generation revenue
- a decrease in gross margin during 2011. This primarily was a result of the cessation of additions to the Tax Loss Variance Account based on the OEB's March 2011 decision
- during the second quarter of 2011, OPG recorded a regulatory asset of \$41 million related to the Pension and OPEB Cost Variance Account. This resulted in reductions to OM&A expenses and income tax expense of \$30 million and \$11 million, respectively
- during the third quarter of 2011, OPG recognized \$19 million of restructuring charges. These charges were due to severance costs related to the closure of the two coal-fired generating units at the Nanticoke GS on December 31, 2011
- during the third quarter of 2011, OPG completed a review of the ARO for most of its thermal stations. This
  resulted in a loss of \$81 million being recognized in accordance with US GAAP in the Thermal business
  segment, and income of \$15 million in the Other category
- a decrease in revenue during the fourth quarter of 2011. This was mainly due to lower generation from the unregulated hydroelectric and nuclear segments, and lower sales prices
- an increase in income in 2011. This was related to the resolution of a number of tax uncertainties for certain prior years, and the recognition in 2011 of investment tax credits for eligible scientific research and experimental development expenditures related to prior years
- a decrease in gross margin during the first quarter of 2012. This was mainly due to lower unregulated hydroelectric generation revenue as a result of lower electricity sales prices and lower generation, and lower revenue from the Contingency Support Agreement, mainly due to the closure of Units 1 and 2 at the Nanticoke GS for the Unregulated – Thermal segment
- lower OM&A expenses for the first quarter of 2012. This was related to the impact of the recognition of a regulatory asset related to the Impact for USGAAP Deferral Account authorized by the OEB during the first quarter of 2012

- a decrease in gross margin during the second quarter of 2012. This was mainly due to lower electricity sales prices and lower unregulated hydroelectric generation revenue
- a decrease in depreciation expense during the second quarter of 2012. This was mainly due to the recognition of the regulatory asset for the Nuclear Liability Deferral Account as a result of the 2012 ONFA Reference Plan approval in June 2012
- at December 31, 2012, the Decommissioning Fund became overfunded. When the Decommissioning Fund becomes overfunded, OPG limits the earnings it recognizes by recording a payable to the Province
- during the first and third quarter of 2013, a decrease in net income as a result of lower nuclear generation, and higher nuclear OM&A as a result of an increase in outage and maintenance activities
- an increase in the recognition of severance costs during the third quarter of 2013, primarily related to the Shareholder declaration mandating that OPG cease the use of coal at the Lambton GS and the Nanticoke GS by December 31, 2013.

Additional information about OPG, including its Annual Information Form, and audited consolidated financial statements as at and for the year ended December 31, 2013 and notes thereto can be found on SEDAR at <u>www.sedar.com</u>.

### SUPPLEMENTARY NON-GAAP FINANCIAL MEASURES

In addition to providing net income in accordance with US GAAP, OPG's MD&A, audited consolidated financial statements as at and for the year ended December 31, 2013 and 2012, and the notes thereto, present certain non-GAAP financial measures. These non-GAAP measures do not have any standardized meaning prescribed by US GAAP. Therefore, they may not be comparable to similar measures presented by other issuers.

OPG uses these non-GAAP measures in making operating decisions and assessing its performance. Readers of the MD&A, consolidated financial statements and the notes thereto use these measures to assess the Company's financial performance from ongoing operations. The Company believes that these indicators are important since they provide additional information about OPG's performance, facilitate comparison of results over different periods, and present a measure consistent with the corporate strategy to operate on a financially sustainable basis. These non-GAAP financial measures have not been presented as an alternative to net income in accordance with US GAAP, but as an indicator of operating performance. The definitions of the non-GAAP financial measures are as follows:

(1) **ROE** is defined as net income divided by average shareholder's equity excluding AOCI, for the period. ROE is measured over a 12-month period ended December 31 and is calculated as follows:

(millions of dollars – except where noted)	2013	2012
ROE Net income Divided by: Average shareholder's equity excluding AOCI	135 8,951	367 8,700
ROE (percent)	1.5	4.2

(2) **FFO Interest Coverage** is defined as FFO before interest divided by Adjusted Interest Expense. FFO before interest is defined as cash flow provided by operating activities adjusted for interest paid, interest capitalized to fixed and intangible assets, and changes to non-cash working capital balances for the period. Adjusted Interest Expense includes net interest expense plus interest income, interest capitalized to fixed and intangible assets, interest applied

to regulatory assets and liabilities, and interest on pension and OPEB projected benefit obligations less expected return on plan assets for the period.

FFO Interest Coverage is measured over a 12-month period ended December 31 and is calculated as follows:

(millions of dollars – except where noted)	2013	2012
FFO before interest		
Cash flow provided by operating activities	1,174	876
Add: Interest paid	255	246
Less: Interest capitalized to fixed and intangible assets	(127)	(126)
Add: Changes to non-cash working capital balances	(239)	(172)
FFO before interest	1,063	824
Adjusted Interest Expense		
Net interest expense	86	117
Add: Interest income	10	7
Add: Interest capitalized to fixed and intangible assets	127	126
Add: Interest related to regulatory assets and liabilities <sup>1</sup>	66	17
Add: Interest on pension and OPEB projected benefit obligations	92	103
less expected return on plan assets		
· · ·		
Adjusted Interest Expense	381	370
FO Interest Coverage (times)	2.8	2.2

The twelve months ended December 31, 2012 number has been adjusted to include all adjustments to interest expense related to regulatory assets and liabilities.

(3) Gross margin is defined as revenue less fuel expense.

(4) Earnings are defined as net income.

For further information, please contact:

Investor Relations

416-592-6700

1-866-592-6700

investor.relations@opg.com

Media Relations

416-592-4008

1-877-592-4008

www.opg.com

www.sedar.com

# STATEMENT OF MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL INFORMATION

Ontario Power Generation Inc.'s (OPG) management is responsible for the presentation and preparation of the annual consolidated financial statements and Management's Discussion and Analysis (MD&A).

The consolidated financial statements have been prepared in accordance with United States generally accepted accounting principles (US GAAP) and the rules and regulations of the United States Securities and Exchange Commission for annual financial statements, as required by *Ontario Regulation 395/11*, as amended, a regulation under the *Financial Administration Act* (Ontario), effective January 1, 2012. The MD&A has been prepared in accordance with the requirements of securities regulators, including National Instrument 51-102 of the Canadian Securities Administrators and its related published requirements.

The consolidated financial statements and information in the MD&A necessarily include amounts based on informed judgments and estimates of the expected effects of current events and transactions with appropriate consideration to materiality. Something is considered material if it is reasonably expected to have a significant impact on the Company's earnings, cash flow, value of an asset or liability, or reputation. In addition, in preparing the financial information we must interpret the requirements described above, make determinations as to the relevancy of information to be included, and make estimates and assumptions that affect the reported information. The MD&A also includes information regarding the impact of current transactions and events, sources of liquidity and capital resources, operating trends, risks and uncertainties. Actual results in the future may differ materially from our present assessment of this information because future events and circumstances may not occur as expected.

In meeting our responsibility for the reliability of the financial information, we maintain and rely on a comprehensive system of internal controls and internal audits, including organizational and procedural controls and internal controls over financial reporting. Our system of internal controls includes: written communication of our policies and procedures governing corporate conduct and risk management; comprehensive business planning; effective segregation of duties; delegation of authority and personal accountability; careful selection and training of personnel; and accounting policies, which we regularly update. This structure ensures appropriate internal controls over transactions, assets and records. We also regularly audit internal controls. These controls and audits are designed to provide us with reasonable assurance that the financial records are reliable for preparing financial statements and other financial information, assets are safeguarded against unauthorized use or disposition, liabilities are recognized, and we are in compliance with all regulatory requirements.

Management, including the President and Chief Executive Officer (CEO) and Chief Financial Officer (CFO), is responsible for maintaining disclosure controls and procedures (DC&P) and internal controls over financial reporting (ICOFR). DC&P is designed to provide reasonable assurance that all relevant information is gathered and reported to senior management, including the President and CEO and the CFO, on a timely basis so that appropriate decisions can be made regarding public disclosure. ICOFR is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the consolidated financial statements in accordance with US GAAP.

An evaluation of the effectiveness of the design and operation of OPG's DC&P and ICOFR was conducted as of December 31, 2013. Accordingly, we, as OPG's President and CEO and CFO, will certify OPG's annual disclosure documents filed with the Ontario Securities Commission, which includes attesting to the design and effectiveness of OPG's DC&P and ICOFR.

The Board of Directors, based on recommendations from its Audit and Finance Committee, reviews and approves the consolidated financial statements and the MD&A, and oversees management's responsibilities for the presentation

and preparation of financial information, maintenance of appropriate internal controls, management and control of major risk areas, and assessment of significant and related party transactions.

The consolidated financial statements have been audited by Ernst & Young LLP, independent external auditors appointed by the Board of Directors. The Independent Auditors' Report outlines the auditors' responsibilities and the scope of their examination and their opinion on OPG's consolidated financial statements. The independent external auditors, as confirmed by the Audit and Finance Committee, had direct and full access to the Audit and Finance Committee, with and without the presence of management, to discuss their audit and their findings therefrom, as to the integrity of OPG's financial reporting and the effectiveness of the system of internal controls.

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**Tom Mitchell** *President and Chief Executive Officer* 

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Robin Heard Interim Chief Financial Officer

March 6, 2014

# INDEPENDENT AUDITORS' REPORT

### To the Shareholder of Ontario Power Generation Inc.

We have audited the accompanying consolidated financial statements of Ontario Power Generation Inc., which comprise the consolidated balance sheets as at December 31, 2013 and 2012, and the consolidated statements of income, comprehensive income, cash flows, and changes in shareholder's equity for the years then ended, and a summary of significant accounting policies and other explanatory information.

### Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with United States generally accepted accounting principles, and for such internal controls as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

### Auditors' Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditors consider internal controls relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal controls. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained in our audits is sufficient and appropriate to provide a basis for our audit opinion.

### Opinion

In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of Ontario Power Generation Inc. as at December 31, 2013 and 2012 and the results of its operations and its cash flows for the years then ended in accordance with United States generally accepted accounting principles.

Toronto, Canada March 6, 2014

Crost + young LLP

Ernst & Young LLP

Chartered Accountants, Licensed Public Accountants

# **CONSOLIDATED STATEMENTS OF INCOME**

Years Ended December 31		
(millions of dollars except where noted)	2013	2012
Revenue (Note 16)	4,863	4,732
Fuel expense (Note 16)	708	755
Gross margin (Note 16)	4,155	3,977
Expenses (Note 16)		
Operations, maintenance and administration	2,747	2,648
Depreciation and amortization (Note 4)	963	664
Accretion on fixed asset removal and nuclear waste management	756	725
liabilities (Note 8)	100	120
Earnings on nuclear fixed asset removal and nuclear waste management	(628)	(651)
funds (Note 8)	(020)	(001)
Property and capital taxes	53	47
Restructuring (Note 22)	50	3
	3,941	3,436
	-,	-,
Income before other income, interest and income taxes	214	541
Other income (Notes 16 and 19)	(38)	(10)
Income before interest and income taxes	252	551
Net interest expense (Note 7)	86	117
Income before income taxes	166	434
Income tax expense (Note 9)	31	67
Net income	135	367
Basic and diluted income per common share (dollars)	0.53	1.43
Common shares outstanding (millions)	256.3	256.3

# CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

Years Ended December 31		
(millions of dollars)	2013	2012
Net income	135	367
Other comprehensive income (loss), net of income taxes		
Net gain (loss) on derivatives designated as cash flow hedges <sup>1</sup>	14	(11)
Reclassification to income of losses on derivatives designated as cash flow hedges <sup>2</sup>	13	18
Reclassification to income of amounts related to pension and other post-employment benefits <sup>3</sup>	42	27
Actuarial gain (loss) and past service credits on re-measurement of liabilities for pension and other post-employment benefits <sup>4</sup>	226	(123)
Other comprehensive income (loss) for the year	295	(89)
Comprehensive income	430	278

<sup>1</sup> Net of income tax expenses of \$3 million and recoveries of \$1 million for 2013 and 2012, respectively.

<sup>2</sup> Net of income tax expenses of \$2 million and \$1 million for 2013 and 2012, respectively.

<sup>3</sup> Net of income tax expenses of \$15 million and \$8 million for 2013 and 2012, respectively.

<sup>4</sup> Net of income tax expenses of \$75 million and recoveries of \$41 million for 2013 and 2012, respectively.

## **CONSOLIDATED STATEMENTS OF CASH FLOWS**

Years Ended December 31 (millions of dollars)	2013	2012
Operating activities		
Net income	135	367
Adjust for non-cash items:		
Depreciation and amortization (Note 4)	963	664
Accretion on fixed asset removal and nuclear waste management liabilities (Note 8)	756	725
Earnings on nuclear fixed asset removal and nuclear waste management funds (Note 8)	(628)	(651)
Pension and other post-employment benefit costs (Note 11)	455	406
Deferred income taxes and other accrued charges	(3)	51
Provision for other liabilities	-	4
Provision for restructuring (Note 22)	50	-
Mark-to-market on derivative instruments	39	284
Provision for used nuclear fuel and low and intermediate level waste	109	103
Regulatory assets and liabilities ( <i>Note 5</i> )	(232)	(418)
Provision for materials and supplies	43	42
Other	(15)	2
	1,672	1,579
Contributions to nuclear fixed asset removal and nuclear waste	(184)	(182)
management funds (Note 8)	((00))	(100)
Expenditures on fixed asset removal and nuclear waste	(199)	(198)
management (Note 8)		
Reimbursement of expenditures on nuclear fixed asset removal and	75	70
nuclear waste management (Note 8)		
Contributions to pension funds and expenditures on other	(407)	(474)
post-employment benefits and supplementary pension plans (Note 11)		
Expenditures on restructuring (Note 22)	(13)	(20)
Net changes to other long-term assets and liabilities	(9)	(71)
Net changes to non-cash working capital balances (Note 17)	239	172
Cash flow provided by operating activities	1,174	876
nvesting activities		
Net proceeds from sale of long-term investments	-	24
nvestment in property, plant and equipment and intangible	(1,568)	(1,427)
assets (Notes 4 and 16)		
Cash flow used in investing activities	(1,568)	(1,403)
Financing activities		
ssuance of long-term debt (Note 6)	515	775
Repayment of long-term debt (Note 6)	(4)	(405)
ncrease (decrease) in short-term debt (Note 7)	32	(60)
Cash flow provided by financing activities	543	310
Not increase (decrease) in each and each equivalente	149	(017)
Net increase (decrease) in cash and cash equivalents		(217)
Cash and cash equivalents, beginning of year	413	630

# **CONSOLIDATED BALANCE SHEETS**

As at December 31 (millions of dollars)	2013	2012
	2013	2012
Assets		
Current assets		
Cash and cash equivalents	562	413
Receivables from related parties (Note 18)	402	442
Other accounts receivable and prepaid expenses	148	125
Nuclear fixed asset removal and nuclear waste management funds (Notes 8 and 16)	25	27
Fuel inventory (Note 16)	390	505
Materials and supplies (Note 16)	95	90
Regulatory assets (Note 5)	306	
Income taxes recoverable	51	63
Deferred income taxes (Note 9)	-	68
	1,979	1,733
Property, plant and equipment (Notes 4 and 16)	24,441	22,923
Less: accumulated depreciation	7,703	7,063
	16,738	15,860
	10,730	13,000
Intangible assets (Notes 4 and 16)	402	380
Less: accumulated amortization	343	328
	59	52
Other assets		
Nuclear fixed asset removal and nuclear waste management		
funds (Notes 8 and 16)	13,471	12,690
Long-term materials and supplies (Note 16)	330	355
Regulatory assets (Note 5)	5,094	6,478
Investments subject to significant influence (Note 20)	359	373
Other long-term assets	61	60
	19,315	19,956
	38,091	37,601

## **CONSOLIDATED BALANCE SHEETS**

As at December 31		
(millions of dollars)	2013	2012
Liabilities		
Current liabilities		
Accounts payable and accrued charges (Note 18)	1,026	891
Short-term debt (Note 7)	32	-
Deferred revenue due within one year	12	12
Deferred income taxes (Note 9)	14	-
Long-term debt due within one year (Note 6)	5	5
Regulatory liabilities (Note 5)	16	-
	1,105	908
Long-term debt (Note 6)	5,620	5,109
		· · ·
Other liabilities		
Fixed asset removal and nuclear waste management	16,257	15,522
liabilities (Notes 8 and 16)		
Pension liabilities (Note 11)	2,741	3,621
Other post-employment benefit liabilities (Note 11)	2,628	3,076
Long-term accounts payable and accrued charges	653	707
Deferred revenue	180	150
Deferred income taxes (Note 9)	565	563
Regulatory liabilities (Note 5)	8	41
	23,032	23,680
Sharahaldar's aquity		
Shareholder's equity Common shares (Note 14) <sup>1</sup>	5,126	5,126
Retained earnings	3,892	3,757
Accumulated other comprehensive loss (Note 10)	(684)	(979)
	8,334	7,904
	0,004	7,504
	38,091	37,601

<sup>1</sup> 256,300,010 common shares outstanding at a stated value of \$5,126 million as at December 31, 2013 and 2012.

Commitments and Contingencies (Notes 5, 6, 9, 11, 12, 13, and 15)

See accompanying notes to the consolidated financial statements

On behalf of the Board of Directors:

Jace Err.

Honourable Jake Epp Chairman

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M. George Lewis Director

# CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDER'S EQUITY

Years Ended December 31		
(millions of dollars except where noted)	2013	2012
Common shares (Note 14)	5126	5126
Retained earnings		
Balance at beginning of year	3757	3390
Net income	135	367
Balance at end of year	3892	3757
Accumulated other comprehensive loss, net of income taxes		
Balance at beginning of year	(979)	(890)
Other comprehensive income (loss) for the year	295	(89)
Balance at end of year	(684)	(979)
Total shareholder's equity at end of year	8334	7904

### NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the years ended December 31, 2013 and 2012

### 1. DESCRIPTION OF BUSINESS

Ontario Power Generation Inc. (OPG or the Company) was incorporated on December 1, 1998 pursuant to the *Business Corporations Act* (Ontario) and is wholly owned by the Province of Ontario (the Province). OPG is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario. OPG's mission is to be Ontario's low cost electricity generator through a focus on three corporate strategies: operational excellence, project excellence, and financial sustainability.

### 2. BASIS OF PRESENTATION

These consolidated financial statements have been prepared and presented in accordance with United States generally accepted accounting principles (US GAAP) and the rules and regulations of the United States Securities and Exchange Commission for annual financial statements, as required by *Ontario Regulation 395/11*, as amended, a regulation under the *Financial Administration Act* (Ontario) (FAA) effective January 1, 2012.

During the first quarter of 2014, OPG received exemptive relief from the Ontario Securities Commission (OSC) requirements of section 3.2 of National Instrument 52-107 *Acceptable Accounting Policies and Auditing Standards*. The exemption allows OPG to file consolidated financial statements based on US GAAP without becoming a Securities and Exchange Commission registrant, or issuing public debt. The exemption will terminate on the earliest of the following:

- January 1, 2019
- the financial year that commences after OPG ceases to have activities subject to rate regulation
- the effective date prescribed by the International Accounting Standards Board for the mandatory application of a standard within International Financial Reporting Standards specific to entities with rate-regulated activities.

This exemption replaces the exemptive relief received by OPG from the OSC in December 2011. The 2011 exemption allowed OPG to file consolidated financial statements based on US GAAP for financial years that began on or after January 1, 2012, but before January 1, 2015.

All dollar amounts are presented in Canadian dollars. Certain of the 2012 comparative amounts have been reclassified from financial statements previously presented to conform to the 2013 consolidated financial statement presentation.

### 3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

### Consolidation

The consolidated financial statements of the Company include the accounts of OPG and its majority-owned subsidiaries, and a variable interest entity (VIE) where OPG is the primary beneficiary. All significant intercompany balances and intercompany transactions have been eliminated on consolidation.

Where OPG does not control an investment, but has significant influence over operating and financing policies of the investee, the investment is accounted for under the equity method. OPG co-owns the Portlands Energy Centre (PEC) gas-fired combined cycle generating station with TransCanada Energy Ltd. and co-owns the Brighton Beach

gas-fired combined cycle generating station with ATCO Power Canada Ltd. OPG accounts for its 50 percent ownership interest in each of these jointly controlled entities under the equity method.

### **Variable Interest Entities**

OPG performs ongoing analysis to assess whether it holds any VIEs. VIEs of which OPG is deemed to be the primary beneficiary are consolidated. The primary beneficiary of a VIE has both the power to direct the activities of the entity that most significantly impact its economic performance and the obligation to absorb losses of the entity that could potentially be significant to the Company. In circumstances where OPG is not deemed to be the primary beneficiary, the VIE is not recorded in OPG's consolidated financial statements.

In 2002, OPG and other Canadian nuclear waste producers established the Nuclear Waste Management Organization (NWMO) in accordance with the *Nuclear Fuel Waste Act* (NFWA). The primary long-term mandate of the NWMO is to implement an approach to address the long-term management of used nuclear fuel. In addition to the above mandate, the NWMO provides project management services for OPG's Deep Geologic Repository project for Low and Intermediate Level Waste (L&ILW) and other nuclear lifecycle liability management services. OPG has the majority of voting rights at the Board of Directors' and members' level. In addition, the NFWA requires the nuclear fuel waste owners to establish and make payments into trust funds for the purpose of funding the implementation of the long-term management plan. OPG currently provides approximately 90 percent of NWMO's funding, primarily towards the Adaptive Phase Management plan for the long-term management of nuclear used fuel. As a result, OPG is expected to absorb a majority of the NWMO's expected losses through future funding in the event of any shortfall. Therefore, OPG holds a variable interest in the NWMO, of which it is the primary beneficiary. Accordingly, the applicable amounts in the accounts of the NWMO, after elimination of all significant intercompany transactions, are consolidated.

### **Use of Management Estimates**

The preparation of financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the consolidated financial statements, and the reported amounts of revenues and expenses during the reporting periods. Management evaluates the Company's estimates on an ongoing basis based upon historical experience, current conditions, and assumptions believed to be reasonable at the time the assumption is made, with any adjustments recognized in the period incurred. Significant estimates are included in the determination of pension and other post-employment benefits (OPEB), asset retirement obligations (AROs), income taxes (including deferred income taxes), contingencies, regulatory assets and liabilities, valuation of derivative instruments, depreciation and amortization expenses, and inventories. Actual results may differ significantly from these estimates.

### **Cash and Cash Equivalents and Short-Term Investments**

Cash and cash equivalents include cash on deposit and money market securities with a maturity of less than 90 days on the date of purchase. All other money market securities with a maturity on the date of purchase that is greater than 90 days, but less than one year, are recorded as short-term investments. These securities are valued at the lower of cost and market.

Interest earned on cash and cash equivalents and short-term investments was 7 million in 2013 (2012 - 5 million) at an average effective rate of 1.2 percent (2012 - 1.1 percent). The interest earned was offset against interest expense in the consolidated statements of income.

### Inventories

Inventories, consisting of fuel and materials and supplies, are measured at the lower of cost and market. Cost is determined as weighted average cost for fuel inventory and average cost for materials and supplies.

### Property, Plant and Equipment, Intangible Assets and Depreciation and Amortization

Property, plant and equipment, and intangible assets are recorded at cost. Interest costs incurred during construction and development are capitalized as part of the cost of the asset based on the interest rates on OPG's long-term debt.

Depreciation and amortization rates for the various classes of assets are based on their estimated service lives. Any asset removal costs that have not been specifically provided for in current or previous periods are charged to operations, maintenance and administration (OM&A) expenses. Repairs and maintenance costs are also expensed when incurred.

Property, plant and equipment are depreciated on a straight-line basis except for computers, and transport and work equipment. These are mostly depreciated on a declining balance basis. Intangible assets, which consist of major application software, are amortized on a straight-line basis. As at December 31, 2013, the amortization periods of property, plant and equipment and intangible assets are as follows:

Nuclear generating stations and major components	15 to 59 years <sup>1</sup>
Thermal generating stations and major components	25 to 55 years
Hydroelectric generating stations and major components	10 to 100 years
Administration and service facilities	10 to 50 years
Computers, and transport and work equipment assets – declining balance	9% to 40% per year
Major application software	5 years
Service equipment	5 to 10 years

<sup>1</sup> As at December 31, 2013, the end of station life for depreciation purposes for the Darlington, Pickering, and Bruce A and B nuclear generating stations ranges between 2019 and 2051. Major components are depreciated over the lesser of the station life and the life of the components.

### Impairment of Long-Lived Assets

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The review is based on the presence of impairment indicators such as the future economic benefit of the assets and external market conditions. The net carrying amount of assets is considered impaired if it exceeds the sum of the estimated undiscounted cash flows expected to result from the asset's use and eventual disposition. In cases where the sum of the undiscounted expected future cash flows is less than the carrying amount, an impairment loss is recognized. This loss equals the amount by which the carrying amount exceeds the fair value. Fair value is determined using expected discounted cash flows when quoted market prices are not available. The impairment is recognized in income in the period in which it is identified.

The carrying value of investments accounted for under the equity method are reviewed for the presence of any indicators of impairment. If an impairment exists and is determined to be other-than-temporary, an impairment charge is recognized. This charge equals the amount by which the carrying value exceeds the investment's fair value.

### **Rate Regulated Accounting**

The Ontario Energy Board Act, 1998 and Ontario Regulation 53/05 provide that OPG receives regulated prices for electricity generated from the Sir Adam Beck 1, 2 and Pump generating station, DeCew Falls 1 and 2, and R.H. Saunders hydroelectric facilities, and the Pickering and Darlington nuclear facilities (prescribed or regulated facilities). OPG's regulated prices for these facilities are determined by the Ontario Energy Board (OEB). Forty-eight of OPG's currently unregulated hydroelectric generating facilities have been prescribed for rate regulation, effective July 1, 2014.

The OEB is a self-funding Crown corporation. Its mandate and authority come from the *Ontario Energy Board Act*, *1998*, the *Electricity Act*, *1998*, and a number of other provincial statutes. The OEB is an independent, quasi-judicial tribunal that reports to the Legislature of the Province through the Minister of Energy. It regulates market participants

in the Province's natural gas and electricity industries. The OEB carries out its regulatory functions through public hearings and other more informal processes, such as consultations.

US GAAP recognizes that rate regulation can create economic benefits and obligations that are required by the regulator to be obtained from, or settled with, the ratepayers. When the Company assesses that there is sufficient assurance that incurred costs in respect of the regulated facilities will be recovered in the future, those costs are deferred and reported as a regulatory asset. When the Company is required to refund amounts to ratepayers in the future in respect of the regulated facilities, including amounts related to costs that have not been incurred and for which the OEB has provided recovery through current regulated prices, the Company records a regulatory liability. Certain of the regulatory assets and liabilities recognized by the Company relate to variance and deferral accounts authorized by the OEB, including those authorized pursuant to *Ontario Regulation 53/05*. Variance accounts capture differences between actual costs and revenues, and the corresponding forecast amounts approved in the setting of regulated prices. The measurement of these regulatory assets and liabilities is subject to certain estimates and assumptions, including assumptions made in the interpretation of *Ontario Regulation 53/05* and the OEB's decisions. The estimates and assumptions made in the interpretation of the regulation and the OEB's decisions are reviewed as part of the OEB's regulatory process.

Regulatory assets and liabilities for variance and deferral account balances approved by the OEB for inclusion in regulated prices are amortized based on approved recovery periods. Disallowed balances, including associated interest, are charged to operations in the period that the OEB's decision is issued. Interest is applied to regulatory balances as prescribed by the OEB, in order to recognize the cost of financing amounts to be recovered from, or repaid to, ratepayers.

Regulatory asset and liabilities for variance and deferral account balances approved by the OEB are classified as current if they are expected to be recovered from, or refunded to, ratepayers within 12 months of the end of the reporting period, based on recovery periods established by the OEB. All other regulatory asset and liability balances are classified as long-term on the consolidated balance sheets.

In addition to regulatory assets and liabilities for variance and deferral accounts authorized by the OEB, OPG recognizes regulatory assets for unamortized amounts recorded in accumulated other comprehensive income (AOCI) in respect of pension and OPEB obligations, and deferred income taxes, in order to reflect the expected recovery or refund of the amounts in respect of the regulated operations through future regulated prices charged to customers. There are measurement uncertainties related to these balances due to the assumptions made in the determination of pension and OPEB obligations and deferred income taxes attributed to the regulated facilities.

See Notes 5, 8, 9, and 11 to these consolidated financial statements for additional disclosures related to the OEB's decisions, regulatory assets and liabilities, and rate regulated accounting.

### Fixed Asset Removal and Nuclear Waste Management Liabilities

OPG recognizes AROs for fixed asset removal and nuclear waste management, discounted for the time value of money. OPG estimates both the amount and timing of future cash expenditures based on current plans for fixed asset removal and nuclear waste management. The liabilities are initially recorded at their estimated fair value, which is based on a discounted value of the expected costs to be paid.

On an ongoing basis, the liabilities for nuclear fixed asset removal and nuclear waste management (Nuclear Liabilities) are increased by the present value of the variable cost portion for the nuclear waste generated each year, with the corresponding amounts charged to operating expenses. Variable expenses relating to low and intermediate level nuclear waste are charged to OM&A expenses. Variable expenses relating to the management and storage of nuclear used fuel are charged to fuel expense. The liabilities may also be adjusted due to any changes in the estimated amount or timing of the underlying future cash flows. Upon settlement of the liabilities, a gain or loss would be recorded.

Accretion arises because the liabilities for fixed asset removal and nuclear waste management are reported on a net present value basis. Accretion expense is the increase in the carrying amount of the liabilities due to the passage of time.

The asset retirement cost is capitalized by increasing the carrying value of the related fixed assets. The capitalized cost is depreciated over the remaining service life of the related fixed assets and is included in depreciation and amortization expenses.

### Nuclear Fixed Asset Removal and Nuclear Waste Management Funds

Pursuant to the Ontario Nuclear Funds Agreement (ONFA) between OPG and the Province, OPG established a Used Fuel Segregated Fund (Used Fuel Fund) and a Decommissioning Segregated Fund (Decommissioning Fund) (together the Nuclear Funds). The Used Fuel Fund is intended to fund expenditures associated with the management of highly radioactive used nuclear fuel bundles, while the Decommissioning Fund was established to fund expenditures associated with nuclear fixed asset removal and the disposal of nuclear L&ILW. OPG maintains the Nuclear Funds in third-party custodial accounts that are segregated from the rest of OPG's assets.

OPG's investments in the Nuclear Funds and the corresponding payable/receivable to/from the Province are classified as held-for-trading. The Nuclear Funds are measured at fair value based on the bid prices of the underlying equity and fixed income securities, and, in the case of the alternative investment portfolio, using appropriate valuation techniques as outlined in Note 13 to these consolidated financial statements, with realized and unrealized gains and losses recognized in OPG's consolidated statements of income.

### Investments in OPG Ventures Inc.

Investments owned by the Company's wholly owned subsidiary, OPG Ventures Inc., are recorded at fair value, and changes to the fair value of the investments are included in revenue in the period in which the change occurs. The fair values of these investments are estimated using a methodology that is appropriate in light of the nature, facts, and circumstances of the respective investments and considers reasonable data and market inputs, assumptions, and estimates. See Note 13 to these consolidated financial statements for additional disclosures related to OPG's investments in OPG Ventures Inc.

### **Revenue Recognition**

All of OPG's electricity generation is offered into the real-time energy spot market administered by the Independent Electricity System Operator (IESO). Revenue is recognized as electricity is generated and metered to the IESO.

### Revenue Recognition - Regulated Generation

Energy revenue generated from OPG's currently regulated facilities has been based on regulated prices determined by the OEB that include a cost of service rate and a rate rider for the recovery or repayment of approved variance and deferral account balances. The following regulated prices, authorized by the OEB for electricity generated from the regulated facilities, were in effect during 2013 and 2012:

(\$/MWh)	2013	2012
Regulated – Nuclear Generation		
Regulated – Nuclear Generation cost of service regulated price	51.52	51.52
Regulated – Nuclear Generation cost of service regulated price Regulated – Nuclear Generation rate riders <sup>1</sup>	6.27	4.33
	57.79	55.85
Regulated – Hydroelectric		
	35.78	35.78
Regulated – Hydroelectric cost of service regulated price Regulated – Hydroelectric rate riders <sup>1</sup>	3.04	(1.65)
	38.82	34.13

<sup>1</sup> In addition to the above rate riders, in 2013, the OEB authorized the interim period rate riders for the period from March 1, 2013 to December 31, 2013. This allowed for the recovery of the retroactive increase in the riders for the period from January 1, 2013 to February 28, 2013. The nuclear interim rate rider was \$0.41/MWh and the regulated hydroelectric interim rate rider was \$0.58/MWh.

The cost of service regulated prices applicable in 2013 and 2012 have been in effect since March 1, 2011 pursuant to the OEB's March 2011 decision and April 2011 order. These regulated prices were determined using a forecast cost of service methodology based on a revenue requirement, taking into account a forecast of production and operating costs for the regulated facilities and a return on rate base. Rate base is a regulatory construct that represents the average net level of investment in regulated fixed and intangible assets and an allowance for working capital.

The rate riders in effect during 2013 were established by the OEB following a decision in March 2013 approving a settlement agreement between OPG and intervenors on OPG's application to recover balances in deferral and variance accounts as at December 31, 2012. The settlement agreement and resulting riders are discussed further in Note 5 to these consolidated financial statements.

In September 2013, OPG filed an application with the OEB for new cost of service regulated prices, proposed to be effective January 1, 2014, using a forecast cost of service methodology. The requested regulated prices include the impact of the Niagara Tunnel declared in-service in March 2013. In addition, OPG's application seeks new rate riders effective January 1, 2015 to recover balances in certain variance and deferral accounts as at December 31, 2013. New regulated prices resulting from the application are expected to remain in effect until December 31, 2015. The decision on OPG's application will be made by the OEB following a public hearing process, which commenced in the fourth quarter of 2013.

In November 2013, the Province amended *Ontario Regulation 53/05* to prescribe 48 of OPG's currently unregulated hydroelectric generating facilities for rate regulation, effective July 1, 2014. These facilities represent all of OPG's hydroelectric generating facilities that are currently not rate-regulated and not subject to an energy supply agreement (ESA) with the OPA, and provide approximately 3,110 MW of generating capacity as at December 31, 2013. The amended regulation requires the OEB to establish the prices received for the production from these facilities. OPG's application, filed in September 2013, includes proposed regulated prices for production from these facilities effective July 1, 2014.

In December 2013, the OEB issued an order granting OPG's request to declare the existing cost of service regulated prices for the currently regulated facilities interim effective January 1, 2014. This may allow OPG to recover the

difference between the approved new regulated prices and the current prices, for the period between January 1, 2014 and the issuance of the order establishing new regulated prices.

The existing hydroelectric regulated prices are subject to a hydroelectric incentive mechanism (HIM) approved by the OEB, with a portion of the resulting net revenues shared with ratepayers. Under the mechanism, OPG receives the approved regulated price for the actual monthly average net energy production per hour from the regulated hydroelectric facilities, and in the hours where OPG's actual net energy production in Ontario is greater or less than the average net volume in the month, OPG's regulated hydroelectric revenues are adjusted by the difference between the average hourly net volume and OPG's actual net energy production from the regulated hydroelectric facilities multiplied by the spot market price. The Hydroelectric Incentive Mechanism Variance Account authorized by the OEB captures net revenues from the HIM that are required to be returned to ratepayers. OPG's September 2013 application proposes to continue the HIM with certain modifications.

### Revenue Recognition - Unregulated Generation and Other Revenue

The electricity generation from OPG's unregulated assets receives the Ontario electricity spot market price, except where a cost recovery agreement or an ESA is in place.

The Lambton and Nanticoke generating stations during 2013 were subject to a Contingency Support Agreement with the Ontario Electricity Financial Corporation (OEFC). The agreement was provided for the recovery of costs associated with these coal-fired generating stations and maintaining these stations for reliability of supply to meet system needs after the Shareholder's resolution and regulations pertaining to carbon dioxide emission reductions. On November 1, 2013, the OEFC provided written notice that would terminate the Contingency Support Agreement, effective December 31, 2013, and triggered an amendment that allows OPG to recover certain costs for the 2014 year. Capacity provided by and production from one unit at Thunder Bay generating station was subject to a Reliability Must Run contract for the period from January 1, 2013 to December 31, 2013. Capacity provided by, and production from, the Lennox generating station was subject to an agreement with the OPA for the period from January 1, 2011 to December 31, 2012. In December 2012, the OPA and OPG executed a long-term Lennox ESA for the period from January 1, 2013 to September 30, 2022. The Lennox ESA allows the station to recover its costs, including a reasonable return, in providing generating capacity to the Ontario electricity system over the next 10 years.

OPG currently has Hydroelectric ESAs with the OPA for the Lac Seul and Ear Falls generating stations, the Healey Falls generating station, the Sandy Falls, Wawaitin, Lower Sturgeon, and Hound Chute generating stations, and the Lower Mattagami River project. Payments under the Lower Mattagami Hydroelectric ESA commenced when the first incremental unit was declared in service in January 2014.

Revenue generated by generating stations subject to a cost recovery agreement or an ESA is recognized in accordance with the terms of the agreement or contract.

OPG also sells into, and purchases from, interconnected markets of other provinces and the United States (US) northeast and midwest. All contracts that are not designated as hedges are recorded in the consolidated balance sheets at market value, with gains or losses recorded in the consolidated statements of income. Gains and losses on energy trading contracts (including those to be physically settled) are recorded on a net basis in the consolidated statements of income. Accordingly, power purchases of \$94 million were netted against revenue in 2013 (2012 – \$61 million).

OPG derives non-energy revenue under the terms of a lease arrangement and associated agreements with Bruce Power L.P. related to the Bruce nuclear generating stations. This includes lease revenue and revenue from services such as heavy water sales and detritiation. Revenue is also earned from isotope sales and ancillary services. The minimum lease payments are recognized in revenue on a straight-line basis over the term of the lease. In addition, non-energy revenue includes isotope sales, real estate rentals and other service revenues. Revenues from these activities are recognized as services are completed, or as products are delivered.

### **Derivatives**

All derivatives, including embedded derivatives that must be separately accounted for, generally are classified as held-for-trading and recorded at fair value in the consolidated balance sheets. Transaction costs are expensed as incurred for financial instruments classified or designated as held-for-trading.

Derivatives qualify for hedge accounting if they meet stringent documentation requirements and the derivative instrument that is designated as a hedge is expected to effectively hedge the identified risk throughout the life of the hedged item. At the inception of a hedging relationship, OPG documents the relationship between the hedging instrument and the hedged item, its risk management objective and its strategy for undertaking the hedge. A documented assessment is made, both at the inception of a hedge and on an ongoing basis, of whether or not the derivatives that are used in hedging transactions are highly effective in offsetting the changes attributable to the hedged risks in the fair values or cash flows of the hedged items.

Specifically for cash flow hedges, the portion of the derivative gain or loss that is effective in offsetting the change in the cost or value of the underlying exposure is deferred in AOCI and later reclassified into net income when the underlying transaction occurs. Gains and losses on interest rate hedges are recorded as an adjustment to interest expense for the debt being hedged. Gains and losses that do not meet the effectiveness criteria are recorded in net income in the period incurred. When a derivative instrument hedge ceases to be effective as a hedge or a hedged item ceases to exist, any associated deferred gains or losses are derecognized from AOCI and are recognized in income in the current period.

Some of OPG's unregulated generation is exposed to changes in electricity prices associated with a wholesale spot market for electricity in Ontario. All derivative contracts not designated as hedges are recorded on the consolidated balance sheets as derivative assets or liabilities at fair value with changes in fair value recorded in the revenue of the Other category. Refer to Note 12 for a discussion of OPG's risks and the derivative instruments used to manage the risks.

### **Fair Value Measurements**

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly arm's-length transaction between market participants at the measurement date. Fair value measurements are required to reflect the assumptions that market participants would use in pricing an asset or liability based on the best available information. These assumptions include the risks inherent in a particular valuation technique, such as a pricing model, and the risks inherent in the inputs to the model. OPG uses a fair value hierarchy, grouping financial assets and liabilities into three levels based on the relative objectivity of the inputs used to measure fair value, with Level 1 representing the highest. Refer to Note 13 for a discussion of fair value measurements and the fair value hierarchy.

### **Foreign Currency Translation**

Monetary assets and liabilities denominated in foreign currencies are translated into Canadian currency at exchange rates prevailing at the consolidated balance sheets date. Any resulting gain or loss is reflected in revenue.

### **Research and Development**

Research and development costs are expensed in the year incurred. Research and development costs incurred to discharge long-term obligations, such as the nuclear waste management liabilities, for which specific provisions have already been made, are charged to the related liability.

#### Leases

Leases are evaluated and classified as either operating or capital leases for financial reporting purposes. Capital leases, which transfer substantially all of the risks and benefits incidental to ownership of the leased item, are capitalized at the inception of the lease at the fair value of the leased property or, if lower, at the present value of the minimum lease payments. Capital leases are depreciated over the shorter of the estimated useful life of the asset or the lease term.

Leases where the lessor retains substantially all the risks and benefits incidental to ownership of the asset are classified as operating leases. Operating lease payments, other than contingent rentals, are recognized as an expense in the consolidated statements of income on a straight-line basis over the lease term. Where the amount of rent expense recognized is less than the actual rental payments, the excess payment amount is recorded as deferred revenue and included in liabilities on the consolidated balance sheets.

### **Pension and Other Post-Employment Benefits**

OPG's post-employment benefit programs consist of a contributory defined benefit registered pension plan, a defined benefit supplementary pension plan, and other post-retirement benefits (OPRB) including group life insurance and health care benefits, and long-term disability (LTD) benefits. Post-employment benefit programs are also provided by the NWMO, which is consolidated into OPG's financial results. Information on the Company's post-employment benefit programs is presented on a consolidated basis.

OPG accrues its obligations under pension and OPEB plans in accordance with US GAAP. The obligations for pension and OPRB are determined using the projected benefit method pro-rated on service. The obligation for LTD benefits is determined using the projected benefit method on a terminal basis. Pension and OPEB obligations are impacted by factors including interest rates, adjustments arising from plan amendments, changes in demographic assumptions, experience gains or losses, salary levels, inflation, and cost escalation. Pension and OPEB costs and obligations are determined annually by independent actuaries using management's best estimate assumptions.

Assumptions are significant inputs to actuarial models that measure pension and OPEB obligations and related effects on operations. Two critical assumptions – discount rate and inflation – are important elements in the determination of benefit costs and obligations. In addition, the expected return on plan assets is a critical assumption in the determination of registered pension plan costs. These assumptions, as well as other assumptions involving demographic factors such as retirement age, mortality, and employee turnover, are evaluated periodically by management in consultation with independent actuaries. During the evaluation process, the assumptions are updated to reflect past experience and expectations for the future. Actual results in any given year will often differ from actuarial assumptions because of economic and other factors. In accordance with US GAAP, for pension and OPRB, the impact of these updates and differences on the respective benefit obligations is accumulated and amortized over future periods; for LTD benefits, the impact of these updates and differences is immediately recognized as OPEB costs in the period incurred.

The discount rates, which are representative of AA corporate bond yields, are used to calculate the present value of the expected future cash flows on the measurement date to determine the projected benefit obligations for the Company's employee benefit plans. A lower discount rate increases the benefit obligations and increases benefit costs. The expected rate of return on plan assets is based on current and expected asset allocation, as well as the expected return considering long-term historical risks and returns associated with each asset class within the plan portfolio. A lower expected rate of return on plan assets increases pension cost.

Pension fund assets include equity securities, corporate and government debt securities, pooled funds, real estate, infrastructure, and other investments. These assets are managed by professional investment managers. The funds do not invest in equity or debt securities issued by OPG. Pension fund assets are valued using market-related values for purposes of determining the amortization of actuarial gains or losses and the expected return on plan assets. The

market-related value recognizes gains and losses on equity assets relative to a six percent assumed real return over a five-year period.

Pension and OPEB costs include current service costs, interest costs on the obligations, the expected return on pension plan assets, adjustments for plan amendments and adjustments for actuarial gains or losses, which result from changes in assumptions and experience gains and losses. Past service costs or credits arising from pension and OPRB plan amendments are amortized on a straight-line basis over the expected average remaining service life to full eligibility of the employees covered by the plan. Past service costs or credits arising from amendments to LTD benefits are immediately recognized as OPEB costs in the period incurred. Due to the long-term nature of pension and OPRB liabilities, the excess of the net cumulative unamortized gain or loss, over 10 percent of the greater of the benefit obligation and the market-related value of the plan assets (corridor), is amortized over the expected average remaining service life of the employees since OPG expects to realize the associated economic benefit over that period. Actuarial gains or losses for LTD benefits are immediately recognized as OPEB costs to realize the associated economic benefit out that period.

OPG recognizes on its consolidated balance sheets the funded status of its defined benefit plans. The funded status is measured as the difference between the fair value of plan assets and the benefit obligation on a plan-by-plan basis.

Actuarial gains or losses and past service costs or credits that arise during the year that are not recognized immediately, as components of benefit costs are recognized as increases or decreases in other comprehensive income (OCI), net of income taxes. These unamortized amounts in AOCI are subsequently reclassified and recognized as components of pension and OPRB costs as discussed above.

OPG records an offsetting regulatory asset or liability for the portion of the adjustments to AOCI that is attributable to regulated operations in order to reflect the expected recovery or refund of these amounts through future regulated prices charged to customers. For the recoverable or refundable portion attributable to regulated operations, OPG records a corresponding change in this regulatory asset or liability for the amount of the increases or decreases in OCI and for the reclassification of AOCI amounts into benefit costs during the period.

When the recognition of the transfer of employees and employee-related benefits gives rise to both a curtailment and a settlement, the curtailment is accounted for prior to the settlement. A curtailment is the loss by employees of the right to earn future benefits under the plan. A settlement is the discharge of a plan's liability.

### **Income Taxes and Investment Tax Credits**

OPG is exempt from income tax under the *Income Tax Act* (Canada). However, under the *Electricity Act, 1998*, OPG is required to make payments in lieu of corporate income taxes to the OEFC. These payments are calculated in accordance with the *Income Tax Act* (Canada) and the *Taxation Act, 2007* (Ontario), as modified by the *Electricity Act, 1998* and related regulations. This results in OPG effectively paying taxes similar to what would be imposed under the federal and Ontario tax acts.

OPG follows the liability method of accounting for income taxes. Under the liability method, deferred income tax assets and liabilities are determined based on differences between the accounting and tax bases of assets and liabilities. Deferred amounts are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. The effect of a change in tax rates on deferred income tax assets and liabilities is included in income in the period the change is enacted.

If management determines that it is more likely than not that some, or all, of a deferred income tax asset will not be realized, a valuation allowance is recorded to report the balance at the amount expected to be realized.

OPG recognizes deferred income taxes associated with its rate regulated operations and records an offsetting regulatory asset or liability for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers.

Tax benefits associated with income tax positions taken, or expected to be taken, in a tax return and investment tax credits are recorded only when the more likely than not recognition threshold is satisfied. Tax benefits and investment tax credits recognized are measured at the largest amount of benefit that is greater than 50 percent likely of being realized upon settlement.

Investment tax credits are recorded as a reduction to income tax expense. OPG classifies interest and penalties associated with unrecognized tax benefits as income tax expense.

### **Changes in Accounting Policies and Estimates**

### Regulatory Assets Related to Newly Regulated Hydroelectric Facilities

Forty-eight of OPG's currently unregulated hydroelectric facilities have been prescribed for rate regulation, effective on July 1, 2014. Upon the effective date of the regulation, OPG expects to recognize additional regulatory assets related to deferred income taxes, and unamortized amounts recorded in AOCI in respect of pension and OPEB obligations. The recognition of the increase in regulatory assets related to deferred income taxes expected to be recovered from customers through future regulated prices is expected to result in an extraordinary gain of approximately \$250 million in the consolidated statements of income. The additional regulatory assets related to pension and OPEB obligations are expected to result in an increase of approximately \$200 million in OCI, net of income taxes.

### Pension and Other Post-Employment Benefits

The weighted average discount rate used to determine the projected pension benefit obligations and the projected benefit obligations for OPEB as at December 31, 2013 was 4.9 percent. This represents an increase, compared to the 4.3 percent discount rate that was used to determine the obligations as at December 31, 2012.

In 2013, OPG conducted an actuarial valuation for accounting purposes for its pension and OPEB plans using demographic data as at January 1, 2013, and assumptions as at December 31, 2013. As part of the valuation, the plan's demographic assumptions were reviewed and revised by independent actuaries. The revised assumptions include the adoption of:

- an updated OPG mortality table that captures the recent experience of OPG pension plan members
- a new scale for expected rates of improvement in future mortality.

The deficit for the registered pension plans decreased from \$3,332 million as at December 31, 2012 to \$2,461 million as at December 31, 2013 largely as a result of the increase in the discount rates at 2013 year end and the gain on pension fund assets in 2013, partially offset by the impact of the new mortality assumptions.

The projected benefit obligations for OPEB decreased from \$3,174 million at December 31, 2012 to \$2,719 million as at December 31, 2013. This decrease was largely due to the increase in the discount rates and the lower per capita health care claims costs assumption. It was partially offset by the impact of the new mortality assumptions.

As a result of the accounting policy for pension and OPEB, as at December 31, 2013, the unamortized net actuarial loss and unamortized past service costs for the pension and OPEB plans totalled \$3,899 million (2012 – \$5,593 million). Details of the unamortized net actuarial loss and unamortized past service costs at December 31, 2013 and 2012 are as follows:

	Regis Pensio		Supplen Pensior		Other Employ Bene	yment
(millions of dollars)	2013	2012	2013	2012	2013	2012
Net actuarial (gain) loss not yet subject to amortization due to use of market-related values	(886)	91	-	-	-	-
Net actuarial loss not subject to amortization due to use of the corridor	1,339	1,367	29	30	245	288
Net actuarial loss subject to amortization	3,043	3,079	50	72	78	662
Unamortized net actuarial loss	3,496	4,537	79	102	323	950
Unamortized past service costs	-	-	-	-	1	4

A change in assumptions, holding all other assumptions constant, would increase (decrease) 2013 costs as follows:

(millions of dollars)	Registered Pension Plans <sup>1</sup>	Supplementary Pension Plans <sup>1</sup>	Other Post- Employment Benefits <sup>1</sup>
Expected long-term rate of return			
0.25% increase	(26)	na	na
0.25% decrease	26	na	na
Discount rate			
0.25% increase	(52)	(1)	(13)
0.25% decrease	55	1	<u></u> 14
Inflation			
0.25% increase	81	2	1
0.25% decrease	(85)	(2)	(1)
Salary increases			
0.25% increase	19	4	1
0.25% decrease	(18)	(3)	(1)
Health care cost trend rate			
1% increase	na	na	94
1% decrease	na	na	(69)

na – change in assumption not applicable.

<sup>1</sup> Excluding the impact of the Pension OPEB Cost Variance Account.

### Useful Lives of Long-Lived Assets

As a result of the announcement by the Minister of Energy to advance the date to cease operation of the remaining coal-fired units at the Lambton and Nanticoke generating stations, OPG has revised the end of life dates for the purposes of calculating depreciation from December 2014 to December 2013 for both generating stations. This change in estimate increased depreciation expense in 2013 by \$58 million reflecting the advancement of the 2014 expense. This increase in depreciation expense was offset by revenue from the Contingency Support Agreement with the OEFC.

### OPG's Reporting Structure

Effective January 1, 2014, OPG revised the composition of its reporting segments to reflect changes in its generation portfolio and to its internal reporting. These changes primarily reflect 48 of OPG's currently unregulated hydroelectric facilities being prescribed for rate regulation, effective July 1, 2014, and ceasing operation of the remaining coal-fired units at the Nanticoke and Lambton generating stations. For further details, refer to Note 16.

### Recent Accounting Pronouncements

### Comprehensive Income - Reporting of Amounts Reclassified Out of Accumulated Other Comprehensive Income

In February 2013, the Financial Accounting Standards Board issued an update to Accounting Standards Codification (ASC) Topic 220 which adds new disclosure requirements for items reclassified out of AOCI. The updates required OPG to present information about significant items reclassified out of AOCI by component in the consolidated financial statements. OPG has provided the required information in Note 10 of these consolidated financial statements and has applied the amendments for reporting periods beginning January 1, 2013.

### Investment Companies

For reporting periods beginning January 1, 2014, OPG will adopt the updates to ASC Topic 946, *Investment Companies*. Based on the amended scope of the standard, OPG concluded that OPG Ventures Inc., the Decommissioning Fund, the Used Fuel Fund and the Ontario NFWA Trust should be treated as investment entities for accounting purposes. As the investments of these entities are already recorded at fair value, there were no measurement differences upon adoption of this update. However, additional disclosures are required in OPG's consolidated financial statements.

### 4. PROPERTY, PLANT AND EQUIPMENT, INTANGIBLE ASSETS AND DEPRECIATION AND AMORTIZATION

Depreciation and amortization expenses for the years ended December 31 consist of the following:

· · · · · · · · · · · · · · · · · · ·		2012
Depreciation	513	480
Amortization of intangible assets	14	15
Amortization of regulatory assets and liabilities (Note 5)	436	169

Property, plant and equipment as at December 31 consist of the following:

(millions of dollars)	2013	2012
Nuclear generating stations	9,116	8,809
Regulated hydroelectric generating stations	6,033	4,548
Unregulated hydroelectric generating stations	4,210	4,140
Thermal generating stations	1,552	1,541
Other property, plant and equipment	390	383
Construction in progress	3,140	3,502
	24,441	22,923
Less: accumulated depreciation		
Generating stations	7,483	6,856
Other property, plant and equipment	220	207
	7,703	7,063
	16,738	15,860

Construction in progress as at December 31 consists of the following:

(millions of dollars)	2013	2012
Niagara Tunnel		1,353
Lower Mattagami	1,982	1,353
Darlington Refurbishment	685	354
Atikokan Biomass Conversion	144	59
Other	329	383
	3,140	3,502

Intangible assets as at December 31 consist of the following:

(millions of dollars)	2013	2012
Nuclear generating stations	114	112
Regulated hydroelectric generating stations	2	-
Unregulated hydroelectric generating stations	7	7
Thermal generating stations	1	2
Other intangible assets	256	249
Development in progress	22	10
	402	380
Less: accumulated amortization		
Generating stations	103	95
Other intangible assets	240	233
	343	328
	59	52

The estimated aggregate amortization expense for intangible assets currently recognized for each of the five succeeding years is as follows:

(millions of dollars)	2014	2015	2016	2017	2018
Amortization expense	12	10	7	3	1

Interest capitalized to construction and development in progress at an average rate of five percent during 2013 (2012 – five percent) was \$127 million (2012 – \$126 million).

### 5. REGULATORY ASSETS AND LIABILITIES

In March 2013, the OEB approved the settlement agreement between OPG and intervenors on all aspects of OPG's September 2012 application requesting approval to recover balances in the authorized variance and deferral accounts as at December 31, 2012 (the Settlement Agreement). This resulted in approval of \$1,234 million recorded in the authorized variance and deferral accounts as at December 31, 2012, deferral for future review of \$34 million recorded in certain accounts as at December 31, 2012, and a write-off of \$7 million of interest recorded in certain accounts as at December 31, 2012. The interest write-off was recorded in net interest expense during the first guarter of 2013.

In approving the Settlement Agreement, the OEB decision authorized the disposition of approved balances over periods ranging from two to 12 years beginning on January 1, 2013. In April 2013, the OEB issued an order establishing new rate riders retroactively effective January 1, 2013 and authorizing OPG to collect \$633 million over the period from March 1, 2013 to December 31, 2014. During the year ended December 2013, the Company amortized balances approved for disposition based on recovery periods authorized by the OEB.

Any shortfall or over-recovery of approved balances due to differences between actual and forecast production is recorded in the authorized Nuclear Deferral and Variance Over/Under Recovery Variance Account and Hydroelectric Deferral and Variance Over/Under Recovery Variance Account to be collected from, or refunded to, ratepayers in the future.

Effective January 1, 2013, as part of the approved Settlement Agreement, OPG ceased recording interest on the balance of the Nuclear Liability Deferral Account (NLDA). For the period from January 1, 2013 to December 31, 2014, OPG is also not recording interest on the balance of the Bruce Lease Net Revenues Variance Account and the majority of the balance of the Pension and OPEB Cost Variance Account. Pursuant to the OEB's April 2013 order, OPG continues to record interest on all other variance and deferral accounts using the interest rate prescribed by the OEB. For the period from January 1, 2012 to December 31, 2013, the prescribed interest rate was 1.47 percent per annum.

The OEB's March 2013 decision and April 2013 order also authorized the continuation of previously existing variance and deferral accounts, including those authorized pursuant to *Ontario Regulation 53/05*. During the year ended December 31, 2013, the Company recorded additions to these variance and deferral accounts as authorized by the OEB. The OEB also approved OPG's use of US GAAP for regulatory purposes and, pursuant to the Settlement Agreement, ordered that only interest and amortization be recorded in the Impact for USGAAP Deferral Account effective January 1, 2013.

In its September 2013 application with the OEB for new regulated prices, OPG requested new rate riders effective January 1, 2015 to recover balances as at December 31, 2013 in those variance accounts, the review of which was deferred as part of the approved Settlement Agreement. These variance accounts are the Hydroelectric Incentive Mechanism Variance Account, the Hydroelectric Surplus Baseload Generation Variance Account, the nuclear capital and hydroelectric portions of the Capacity Refurbishment Variance Account, and the Nuclear Development Variance Account. OPG's September 2013 application is discussed further in Note 3.

During the year ended December 31, 2012, OPG recorded additions to variance and deferral accounts as authorized by the applicable OEB decisions and orders and, pursuant to the OEB's March 2011 decision and April 2011 order on OPG's application for regulated prices, amortized account balances as at December 31, 2010.

The regulatory assets and liabilities recorded as at December 31 are as follows:

(millions of dollars)	2013	2012
Regulatory assets		
Variance and deferral accounts as authorized by the OEB		
Pension and OPEB Cost Variance Account	667	324
Bruce Lease Net Revenues Variance Account	353	311
Nuclear Liability Deferral Account	254	208
Tax Loss Variance Account	124	302
Capacity Refurbishment Variance Account	100	14
Nuclear Development Variance Account	57	30
Other variance and deferral accounts	128	127
	1,683	1,316
Pension and OPEB Regulatory Asset (Note 11)	3,158	4,494
Deferred Income Taxes (Note 9)	559	668
Total regulatory assets	5,400	6,478
Less: current portion	306	-
Non-current regulatory assets	5,094	6,478
Regulatory liabilities		
Variance and deferral accounts as authorized by the OEB		
Other variance and deferral accounts	24	41
Total regulatory liabilities	24	41
Less: current portion	16	-
	10	
Non-current regulatory liabilities	8	41

Pension Other and Bruce Capacity Nuclear Pension Variance OPEB Lease Net Nuclear Refurbish Developand OPEB Deferred and Cost Revenues Liability Tax Loss -ment ment Regulatory Income Deferral (millions of dollars) Variance Variance Deferral Variance Variance Variance Asset Taxes (net) Net regulatory assets 96 196 22 425 (1) (55) 3,553 699 (72) (liabilities), January 1, 2012 Change during the 225 248 206 10 25 941 (31)107 vear 3 3 5 Interest 1 Amortization during (128) 5 60 51 (136)(21)the year Net regulatory assets 324 311 208 302 14 30 4,494 668 86 December 31, 2012 Change during the 402 110 123 93 26 (1,336)(109)68 year Interest 1 (5) (2)3 1 Amortization during (60)(63)(75)(181)(7)(50)the year Net regulatory assets. December 31, 2013 667 353 254 124 100 57 3,158 559 104

The changes in the regulatory assets and liabilities during 2013 and 2012 are as follows:

### **Pension and OPEB Cost Variance Account**

The OEB established the Pension and OPEB Cost Variance Account in its June 2011 decision and order. The variance account records the difference between actual pension and OPEB costs for the regulated business and related tax impacts, and the corresponding amounts reflected in the current regulated prices. The OEB's June 2011 decision and order established the account for the period from March 1, 2011 to December 31, 2012. In approving the Settlement Agreement, the OEB authorized the continuation of the variance account.

In its March 2013 decision and April 2013 order, the OEB authorized the recovery of 2/12 of the balance in the Pension and OPEB Cost Variance Account as at December 31, 2012 over a 24-month period ending December 31, 2014. The OEB also authorized the recovery of 10/12 of the account balance as at December 31, 2012 over a 144-month period ending December 31, 2024. Accordingly, effective January 1, 2013, OPG recorded amortization of the regulatory asset for the account on a straight-line basis over these periods.

#### **Bruce Lease Net Revenues Variance Account**

As per *Ontario Regulation 53/05*, the OEB is required to include the difference between OPG's revenues and costs associated with its ownership of the two nuclear stations on lease to Bruce Power L.P. in the determination of the regulated prices for production from OPG's regulated nuclear facilities. The OEB established a variance account that captures differences between OPG's revenues and costs related to the nuclear generating station on lease to Bruce Power L.P. and the corresponding forecasts included in the approved nuclear regulated prices.

In its March 2013 decision and April 2013 order, the OEB ordered the portion of the balance in the Bruce Lease Net Revenues Variance Account as at December 31, 2012 related to the impact of the derivative liability embedded in the Bruce Power lease agreement (Bruce Lease) to be recovered on the basis of OPG's expected rent rebate payment to

Bruce Power L.P., including associated income tax impacts. Effective January 1, 2013, OPG recorded amortization of the regulatory asset for this portion of the account on this basis.

The remaining portion of the balance as at December 31, 2012 was authorized by the OEB to be recovered over a 48-month period ending December 31, 2016. Effective January 1, 2013, OPG recorded amortization of the regulatory asset for the non-derivative portion of the account on a straight-line basis over this period.

### **Nuclear Liability Deferral Account**

As per *Ontario Regulation 53/05*, the OEB has authorized the NLDA in connection with changes to OPG's liabilities for nuclear used fuel management and nuclear decommissioning and L&ILW management associated with the nuclear facilities owned and operated by OPG, which are comprised of the Pickering and Darlington nuclear generating stations. The deferral account records the revenue requirement impact associated with the changes in these liabilities arising from an approved reference plan, in accordance with the terms of the ONFA. During 2012, the Province approved the 2012 ONFA Reference Plan, covering the period from 2012 to 2016, with an effective date of January 1, 2012. As a result, OPG has been recording an increase to the regulatory asset for the NLDA effective January 1, 2012.

During the years ended December 31, 2013 and 2012, the following amounts have been recorded as components of the increase in the regulatory asset for the NLDA relating to the above increase in liabilities, with reductions to corresponding expenses:

(millions of dollars)	2013	2012
Fuel expense	26	25
Low and intermediate level waste management variable expenses <sup>1</sup>		1
Depreciation expense	52	98
Return on rate base <sup>2</sup>	2	22
Interest <sup>3</sup>	(2)	1
Income taxes	42	60
	121	207

<sup>1</sup> Amount was recorded as a reduction to OM&A expenses.

<sup>2</sup> Amount was recorded as a reduction to accretion on fixed asset removal and nuclear waste management liabilities.

<sup>3</sup> Amount in 2013 represents the write-off of interest recorded on the balance of the account as of December 31, 2012, pursuant to the approved Settlement Agreement.

In its March 2013 decision and April 2013 order, the OEB approved the recovery of a portion of the balance in the NLDA as at December 31, 2012 over a 24-month period ending December 31, 2014. Accordingly, effective January 1, 2013, OPG recorded amortization for this account on a straight-line basis over this period.

### **Tax Loss Variance Account**

The Tax Loss Variance Account pertains to the treatment of tax losses and their use for mitigation. In accordance with a May 2009 decision by the OEB, this account recorded, up to March 1, 2011, the difference between the amount of mitigation included in the approved regulated prices established by the OEB's 2008 decision and the revenue requirement reduction available from carried forward prior period tax losses, as recalculated per the OEB's 2008 decision. Only interest and amortization are recorded in this account, effective March 1, 2011.

In its March 2013 decision and April 2013 order, the OEB approved the recovery of the balance in the account as at December 31, 2012 over a 24-month period ending December 31, 2014. Accordingly, effective January 1, 2013, OPG recorded amortization for this account on a straight-line basis over this period.

#### Pension and OPEB Regulatory Asset

The regulated prices established by the OEB for generation from OPG's regulated facilities, using a forecast cost of service methodology, reflect amounts for pension and OPEB costs attributable to these facilities. These amounts are determined on the basis of the manner in which these costs are recognized in OPG's consolidated financial statements. Unamortized amounts, in respect of OPG's pension and OPEB plans that are recognized in AOCI, are not generally reflected in the regulated prices until these amounts are reclassified from AOCI, and recognized as amortization components of the benefit costs in respect of these plans. As such, OPG recognizes an offsetting regulatory asset for the unamortized amounts that have not yet been reclassified from AOCI to benefit costs. The regulatory asset is reversed, as underlying unamortized balances are amortized as components of the benefit costs.

The AOCI amounts related to pension and OPEB plans are presented in Note 11.

#### **Deferred Income Taxes**

OPG is required to recognize deferred income taxes associated with its rate regulated operations, including deferred income taxes on temporary differences related to the regulatory assets and liabilities recognized for accounting purposes. In addition, OPG is required to recognize a separate regulatory asset or liability for the amount of deferred income taxes expected to be included in future regulated prices and recovered from, or paid to, customers.

### **Capacity Refurbishment Variance Account**

Pursuant to *Ontario Regulation 53/05*, the OEB has authorized the Capacity Refurbishment Variance Account (CRVA). The account captures variances from the forecasts reflected in the regulated prices for capital and non-capital costs incurred to increase the output of, refurbish, or add operating capacity to one or more of the regulated facilities. The balance in the account as at December 31, 2013 includes variances related to the Niagara Tunnel, the refurbishment of the Darlington nuclear generating station, life extension initiatives at the Pickering nuclear generation station, and other projects.

OPG determines amounts to be recovered from, or refunded to customers, with respect to variances in capital costs as the difference from forecast depreciation expense and cost of capital associated with OPG's investment in capital placed in-service and reflected in the current regulated prices, as well as associated income tax effects. The cost of capital amount in the account is calculated using the weighted average cost of capital, including a return on equity, as approved by the OEB in setting the current regulated prices. In accordance with US GAAP, in recognizing a regulatory asset or liability for the CRVA in its consolidated financial statements, OPG limits the portion of cost of capital additions recognized as a regulatory asset or liability to the amount calculated using the average rate of capitalized interest applied to construction and development in progress.

As the existing cost of service regulated prices established in 2011 do not reflect the impact of the Niagara Tunnel, the CRVA additions in 2013 included \$114 million to be recovered from ratepayers related to the Niagara Tunnel that was declared in-service in March 2013. This amount included \$83 million as the capital cost component determined using the weighted average cost of capital. In these consolidated financial statements, OPG recognized an increase of \$88 million in the regulatory asset for the CRVA related to the Niagara Tunnel in 2013, of which \$56 million represented the capital cost component determined using the average rate of five percent for capitalized interest applied to construction and development in progress for the year ended December 31, 2013.

OPG's September 2013 application to the OEB for new regulated prices includes the impact of the Niagara Tunnel starting in 2014 and requests recovery of the balance of the CRVA related to the Niagara Tunnel as at December 31, 2013. The application also requests recovery of the balance in the account for capital costs related to the refurbishment of the Darlington nuclear generating station, as at December 31, 2013. The amounts sought in the 2013 application to the OEB, in respect to the CRVA, are \$119 million.

In its March 2013 decision and April 2013 order, the OEB approved the recovery of the portion of the account balance as at December 31, 2012 related to non-capital nuclear costs over a 24-month period ending December 31, 2014. Accordingly, effective January 1, 2013, OPG recorded amortization of the regulatory asset for the non-capital nuclear portion of the account on a straight-line basis over this period.

# **Nuclear Development Variance Account**

The Nuclear Development Variance Account was established pursuant to *Ontario Regulation 53/05* and records differences between actual non-capital costs incurred by OPG in the course of planning and preparing for the development of proposed new nuclear facilities, and the forecast amount of these costs included in the current nuclear regulated prices.

In its March 2013 decision and April 2013 order, the OEB deferred the consideration of the recovery of the balance in the account as at December 31, 2012. OPG's September 2013 application to the OEB for new regulated prices requests recovery of the balance in the account as at December 31, 2013, which includes amounts recorded for the period from March 1, 2011 to December 31, 2013.

# **Other Variance and Deferral Accounts**

As at December 31, 2013 and 2012, regulatory assets for other variance and deferral accounts included amounts for the Nuclear Deferral and Variance Over/Under Recovery Variance Account, Ancillary Services Net Revenue Variance Account, the Impact for USGAAP Deferral Account, the Hydroelectric Water Conditions Variance Account, and the Hydroelectric Surplus Baseload Generation Variance Account.

The Ancillary Services Net Revenue Variance Account was authorized by the OEB to capture differences between actual nuclear and regulated hydroelectric ancillary services net revenue and the forecast amounts of such revenue approved by the OEB in setting regulated prices.

The Impact for USGAAP Deferral Account recorded, for the period from January 1, 2012 to December 31, 2012, the financial impacts resulting from OPG's transition to and implementation of US GAAP.

The Hydroelectric Water Conditions Variance Account captures the impact of differences in regulated hydroelectric electricity production due to differences between forecast water conditions underlying the hydroelectric production forecast approved by the OEB in setting current regulated hydroelectric prices, and the actual water conditions. The Hydroelectric Surplus Baseload Generation Variance Account records the impact of foregone production at OPG's regulated hydroelectric facilities due to surplus baseload generation conditions.

As at December 31, 2013 and 2012, regulatory liabilities for other variance and deferral accounts included amounts for the Income and Other Taxes Variance Account and the Hydroelectric Incentive Mechanism Variance Account. The Income and Other Taxes Variance Account includes deviations in income taxes for the regulated business, from those approved by the OEB in setting regulated prices and caused by changes in tax rates and rules, as well as reassessments.

The regulatory assets for other variance and deferral accounts as at December 31, 2013 and the regulatory liabilities for other variance and deferral accounts as at December 31, 2012 also included amounts for the Hydroelectric Deferral and Variance Over/Under Recovery Variance Account.

In its March 2013 decision and April 2013 order, the OEB approved the recovery or repayment of the majority of the balances of the other variance and deferral accounts as at December 31, 2012 over a 24-month period ending December 31, 2014. Accordingly, effective January 1, 2013, OPG recorded amortization of the balances on a straight-line basis over this period.

### 6. LONG-TERM DEBT

Long-term debt consists of the following as at December 31:

(millions of dollars)	2013	2012
Long-term debt <sup>1</sup>		
Notes payable to the Ontario Electricity Financial Corporation		
Senior Notes <sup>2</sup>		
3.43% due 2015	500	500
4.91% due 2016	270	270
5.35% due 2017	900	900
5.27% due 2018	395	395
5.44% due 2019	365	365
4.56% due 2020	660	660
4.28% due 2021	185	185
3.30% due 2022	150	150
3.12% due 2023	40	-
5.07% due 2041	300	300
4.36% due 2042	200	200
UMH Energy Partnership debt <sup>3</sup>		
Senior Notes		
7.86% due to 2041	193	195
1.00 // 440 10 20 11	100	100
Lower Mattagami Energy Limited Partnership <sup>4</sup>		
Senior Notes		
2.59% due 2015	92	94
2.35% due 2017	200	200
4.46% due 2021	225	225
5.26% due 2041	250	250
5.05% due 2043	200	
4.26% due 2046	275	-
4.26% due 2052	225	225
	5,625	5,114
Less: due within one year	5	5
Long-term debt	5,620	5,109

<sup>1</sup> The interest rates disclosed reflect the effective interest rate of the debt.

<sup>2</sup> OEFC senior debt is entitled to receive, in full, amounts owing in respect of the senior debt and is pari passu to the UMH Energy Partnership and the Lower Mattagami Energy Limited Partnership (LME) senior notes.

<sup>3</sup> These notes are secured by the assets of the Upper Mattagami and Hound Chute project and are recourse to OPG until specified conditions have been satisfied following construction. These notes rank pari passu to the OEFC senior notes.

<sup>4</sup> These notes are secured by the assets of the Lower Mattagami River project, including existing operating facilities and facilities being constructed, and are recourse to OPG until the recourse release date. These notes rank pari passu to the OEFC senior notes.

OPG maintains a Niagara Tunnel project credit facility with the OEFC for an amount up to \$1.6 billion. Interest will be fixed for each note issued at the time of advance at a rate equal to the prevailing Benchmark Government of Canada 10-Year Bond, plus a credit spread determined by the OEFC based on a survey of market rates. OPG's borrowing under this facility is limited to the cost of the project. This credit facility expires on December 31, 2014. As at December 31, 2013, advances under this facility were \$1,065 million (2012 – \$1,025 million).

OPG entered into an agreement with the OEFC in December 2013 for a \$500 million general corporate credit facility. As of December 31, 2013, there were no outstanding borrowings under the credit facility. This credit facility expires on December 31, 2014.

Interest paid in 2013 was \$255 million (2012 – \$246 million), of which \$246 million (2012 – \$235 million) relates to interest paid on long-term corporate debt.

The book value of the pledged assets as at December 31, 2013 was \$2,756 million (2012 - \$2,099 million).

(millions of dollars)	
2014	5
2015	593
2016	273
2017	1,103
2018	398
Thereafter	3,253
	5,625

A summary of the contractual maturities by year is as follows:

### 7. SHORT-TERM DEBT AND NET INTEREST EXPENSE

OPG maintains a \$1 billion revolving committed bank credit facility, which is divided into two \$500 million multi-year term tranches. In the second quarter of 2013, OPG renewed and extended both tranches by one year to May 2018. As at December 31, 2013, there were no outstanding borrowings under the bank credit facility (2012 - nil).

The LME maintains a \$600 million bank credit facility to support the funding requirements for the Lower Mattagami River project. The facility consists of two tranches. The first tranche of \$400 million was reduced to \$300 million during the third quarter of 2013, and the maturity date was extended by one year to August 17, 2018. The second tranche of \$300 million has a maturity date of August 17, 2015. As at December 31, 2013, \$32 million of commercial paper was outstanding under this program (2012 – nil). In 2011, OPG executed a \$700 million credit facility with the OEFC in support of the Lower Mattagami River project. As at December 31, 2013 and 2012, there were no outstanding borrowings under this credit facility.

The Company has an agreement, which expires November 30, 2014, to sell an undivided co-ownership interest up to \$250 million in its current and future accounts receivable to an independent trust. The Company also retains an undivided co-ownership interest in the receivables sold to the trust. Under the agreement, OPG continues to service the receivables. The transfer provides the trust with ownership of a share of the payments generated by the receivables, computed on a monthly basis. The trust's recourse to the Company is generally limited to its income earned on the receivables. As at December 31, 2013, there were Letters of Credit outstanding under this agreement of \$80 million (2012 – \$55 million), which were issued in support of OPG's supplementary pension plans.

As at December 31, 2013, OPG maintained \$25 million of short-term, uncommitted overdraft facilities and \$374 million of short-term, uncommitted credit facilities, which support the issuance of the Letters of Credit. OPG uses Letters of Credit to support its supplementary pension plans and for other general corporate purposes.

As at December 31, 2013, there was a total of \$327 million of Letters of Credit issued. This included \$302 million for the supplementary pension plans, of which \$80 million related to accounts receivable sold to an independent trust, as discussed above; \$24 million for general corporate purposes; and \$1 million related to the operation of the PEC.

In addition, as at December 31, 2013, the NWMO has issued a Letter of Credit of \$4 million for its supplementary pension plan.

The following table summarizes the net interest expense for the years ended December 31:

(millions of dollars)	2013	2012
Interest on long-term debt	280	256
Interest on short-term debt	9	11
Interest income	(10)	(7)
Interest capitalized to property, plant and equipment and intangible assets	(127)	(126)
Interest related to regulatory assets and liabilities <sup>1</sup>	(66)	(17)
Net interest expense	86	117

<sup>1</sup> Includes interest to recognize the cost of financing related to regulatory assets and liabilities and interest deferred in the Capacity Refurbishment Variance Account and the Bruce Lease Net Revenues Variance Account.

### 8. FIXED ASSET REMOVAL AND NUCLEAR WASTE MANAGEMENT LIABILITIES

The liabilities for fixed asset removal and nuclear waste management on a present value basis consist of the following as at December 31:

(millions of dollars)	2013	2012
Liability for nuclear used fuel management	9,957	9.469
Liability for nuclear decommissioning and low and intermediate	5,946	5,708
level waste management		
Liability for non-nuclear fixed asset removal	354	345
Fixed asset removal and nuclear waste management liabilities	16,257	15,522

The changes in the fixed asset removal and nuclear waste management liabilities for the years ended December 31 are as follows:

(millions of dollars)	2013	2012
Liabilities, beginning of year	15,522	14.392
Increase in liabilities due to accretion <sup>1</sup>	826	774
Increase in liabilities reflecting a change to the useful lives of the Pickering and Bruce nuclear generating stations		451
Increase in liabilities due to nuclear used fuel, nuclear waste management variable expenses and other expenses	109	103
Liabilities settled by expenditures on fixed asset removal and nuclear waste management	(199)	(198)
Change in the liabilities for non-nuclear fixed asset removal	(1)	-
Liabilities, end of year	16,257	15,522

<sup>1</sup> The increase in liabilities due to accretion for 2013 excludes reductions to accretion expense due to the impact of the NLDA of \$2 million (2012 – \$22 million) and the Bruce Lease Net Revenues Variance Account of \$68 million (2012 – \$27 million).

During 2013, expenditures on fixed asset removal and nuclear waste management included \$58 million in funding to the NWMO related to OPG's nuclear fixed asset removal and nuclear waste management liabilities (2012 – \$57 million).

OPG's fixed asset removal and nuclear waste management liabilities are comprised of expected costs to be incurred up to and beyond termination of operations and the closure of nuclear, thermal generating plant facilities, and other facilities. Costs will be incurred for activities such as preparation for safe storage, safe storage, dismantling, demolition and disposal of facilities and equipment, remediation and restoration of sites, and the ongoing and longterm management of nuclear used fuel and L&ILW waste material. Under the terms of the Bruce agreement, OPG continues to be primarily responsible for the nuclear fixed asset removal and nuclear waste management liabilities associated with the Bruce nuclear generating stations.

The determination of the accrual for fixed asset removal and nuclear waste management costs requires significant assumptions since these programs run for many years. The most recent update of the estimates for the nuclear waste management and decommissioning liabilities is contained in the approved 2012 ONFA Reference Plan. The update resulted in an increased estimate of costs mainly due to higher costs for the construction of the L&ILW underground repository, higher costs for handling and storing of used fuel and L&ILW during station operations, and changes in economic indices. The increase was partially offset by lower expected costs to decommission reactors.

For the purposes of calculating OPG's nuclear fixed asset removal and nuclear waste management liabilities, as at December 31, 2013, consistent with the current accounting end of life assumptions, nuclear station decommissioning is projected to occur over the next 41 years.

To reflect the change in 2012 in estimated station useful lives for the Pickering generating station and the Bruce generating stations leased to Bruce Power L.P., OPG recorded an increase to the estimate of the Nuclear Liabilities of \$451 million at December 31, 2012.

The updated estimates for the Nuclear Liabilities included cash flow estimates for decommissioning nuclear stations for approximately 40 years after station shut down and to 2071 for placement of used fuel into the long-term disposal repository followed by extended monitoring. The undiscounted amount of estimated future cash flows associated with the liabilities is approximately \$33.8 billion in 2013 dollars. The weighted average discount rate used to calculate the present value of the liabilities at December 31, 2013 was 5.37 percent. The increase in the liabilities recorded as at December 31, 2012, which reflects the change in estimated useful lives and is consistent with the approved 2012 ONFA Reference Plan, was determined by discounting the net incremental future cash flows at 3.5 percent. The cost escalation rates used to determine the increase in the cost estimates ranged from 1.9 percent to 3.7 percent.

The significant assumptions underlying operational and technical factors used in the calculation of the accrued Nuclear Liabilities are subject to periodic review. Changes to these assumptions, including changes to assumptions on the timing of the programs, end of life dates, financial indicators, or the technology employed may result in significant changes to the value of the accrued liabilities. With programs of this duration and the evolving technology to handle the nuclear waste, there is a significant degree of uncertainty surrounding the measurement of the costs for these programs, which may increase or decrease over time.

### Liability for Nuclear Used Fuel Management Costs

The liability for nuclear used fuel management represents the cost of managing the highly radioactive used nuclear fuel bundles. The federal NFWA, proclaimed into force in 2002, requires that Canada's nuclear fuel waste owners form a nuclear waste management organization, and that each waste owner establish a trust fund for used fuel management costs. To estimate its liability for nuclear used fuel management costs, OPG has adopted a conservative approach consistent with the Adaptive Phased Management concept approved by the Government of Canada, which assumes a deep geologic repository in-service date of 2035.

# Liability for Nuclear Decommissioning and L&ILW Management Costs

The liability for nuclear decommissioning and L&ILW management represents the estimated costs of decommissioning nuclear generating stations after the end of their service lives, as well as the cost of managing L&ILW generated by the nuclear stations. The significant assumptions used in estimating future nuclear fixed asset removal costs include decommissioning of nuclear generating stations on a deferred dismantlement basis, where the reactors will remain in a safe storage state for a 30-year period prior to a 10-year dismantlement period.

The life cycle costs of L&ILW management include the costs of processing and storage of such radioactive wastes during and following the operation of the nuclear stations, as well as the costs of ultimate long-term management of

these wastes. The current assumptions used to establish the accrued L&ILW management costs include a L&ILW deep geologic repository (L&ILW DGR). Agreement has been reached with local municipalities for OPG to develop a deep geologic repository for the long-term management of L&ILW adjacent to the Western Waste Management Facility.

OPG has suspended design activities pending receipt of the site preparation and construction licence which is expected in the first half of 2015.

### Liability for Non-Nuclear Fixed Asset Removal Costs

The liability for non-nuclear fixed asset removal primarily represents the estimated costs of decommissioning OPG's thermal generating stations. The liability is based on third-party cost estimates after an in-depth review of active plant sites and an assessment of required clean-up and restoration activities. As at December 31, 2013, the estimated retirement dates of the thermal stations for the purposes of this liability are between 2014 and 2030. The discount rates range from 1.5 percent to 5.8 percent. The undiscounted amount of estimated future cash flows associated with the non-nuclear liabilities is \$491 million in 2013 dollars.

As at December 31, 2013, in addition to the \$134 million liability for active sites, OPG has an ARO of \$220 million for decommissioning and restoration costs associated with plant sites that are no longer in use for electricity generation, including the Nanticoke and Lambton generating stations.

### **Ontario Nuclear Funds Agreement**

The Decommissioning Fund was established to fund the future costs of nuclear fixed asset removal, long-term L&ILW management and a portion of used fuel storage costs after station life. As at December 31, 2013, the Decommissioning Fund was in an overfunded position.

The Used Fuel Fund was established to fund future costs of long-term nuclear used fuel waste management. OPG is responsible for the risk and liability of cost increases for used fuel waste management, subject to graduated liability thresholds specified in the ONFA, which limit OPG's total financial exposure at approximately \$12.9 billion in present value dollars as at December 31, 2013, based on used fuel bundle projections of 2.23 million bundles, consistent with the station life assumptions included within the initial financial reference plan. The graduated liability thresholds do not apply to additional used fuel bundles beyond 2.23 million.

OPG makes quarterly payments to the Used Fuel Fund over the life of its nuclear generating stations, as specified in the ONFA. Required funding for 2013 under the ONFA was \$184 million (2012 – \$182 million), including a contribution to the Ontario NFWA Trust (the Trust) of \$154 million (2012 – \$149 million). Based on the approved 2012 ONFA Reference Plan, OPG is required to contribute annual amounts to the Used Fuel Fund, ranging from \$139 million to \$193 million over the years 2014 to 2018 (Refer to Note 15).

The NFWA was proclaimed into force in November 2002. As required under the NFWA, OPG established the Trust in November 2002 and made an initial deposit of \$500 million into the Trust. The NFWA required OPG to make annual contributions of \$100 million to the Trust, until such time that the NWMO proposed funding formula, designed to address the future financial costs of implementing the Adapted Phase Management approach, was approved by the Federal Minister of Natural Resources. In 2009, this funding formula was approved. The Trust forms part of the Used Fuel Fund, and contributions to the Trust, as required by the NFWA, may be applied towards OPG's ONFA payment obligations.

As required by the terms of the ONFA, the Province has provided a Provincial Guarantee to the Canadian Nuclear Safety Commission (CNSC) since 2003, on behalf of OPG. The *Nuclear Safety and Control Act* (Canada) requires OPG to have sufficient funds available to discharge the current nuclear decommissioning and waste management liabilities. The Provincial Guarantee provides for any shortfall between the CNSC consolidated financial guarantee requirement and the Nuclear Funds. OPG pays the Province an annual guarantee fee of 0.5 percent of the amount

of the Provincial Guarantee provided by the Province. The current value of the Provincial Guarantee amount of \$1,551 million is in effect through to the end of 2017. In each of January 2013 and 2014, OPG paid a guarantee fee of \$8 million based on a Provincial Guarantee amount of \$1,551 million.

# **Decommissioning Fund**

Upon termination of the ONFA, the Province has a right to any excess funding in the Decommissioning Fund, which is the excess of the fair market value of the Decommissioning Fund over the estimated completion costs, as per the most recently approved ONFA Reference Plan. When the Decommissioning Fund is overfunded, OPG limits the earnings it recognizes in its consolidated financial statements by recording a payable to the Province, such that the balance of the Decommissioning Fund is equal the cost estimate of the liability based on the most recently approved ONFA Reference Plan. The payable to the Province may be reduced in subsequent periods in the event that the Decommissioning Fund earns less than its target rate of return or in the event that a new ONFA Reference Plan is approved with a higher estimated decommissioning liability. When the Decommissioning Fund is underfunded, the earnings on the Decommissioning Fund reflect actual fund returns based on the market value of the assets.

The Province's right to any excess funding in the Decommissioning Fund upon termination of the ONFA results in OPG capping its annual earnings at 3.25 percent plus long-term Ontario Consumer Price Index (CPI), which is the rate of growth in the liability for the estimated completion cost, as long as the Decommissioning Fund is in an overfunded status.

The Decommissioning Fund's asset value on a fair value basis was \$5,967 million as at December 31, 2013, which was net of the due to the Province of \$624 million, as the asset value of the fund was higher than the liability per the approved 2012 ONFA Reference Plan. As at December 31, 2012, the Decommissioning Fund's asset value on a fair value basis was \$5,707 million, also higher than the liability per the 2012 ONFA Reference Plan. Under the ONFA, if there is a surplus in the Decommissioning Fund such that the liabilities, as defined by the most recently approved ONFA Reference Plan, are at least 120 percent funded, OPG may direct up to 50 percent of the surplus over 120 percent to be treated as a contribution to the Used Fuel Fund and the OEFC would be entitled to a distribution of an equal amount. Since OPG is responsible for the risks associated with liability cost increases and investment returns in the Decommissioning Fund, future contributions to the Decommissioning Fund may be required should the fund be in an underfunded position at the time of the next liability reference plan review.

The investments in the Decommissioning Fund include a diversified portfolio of equities and fixed income securities that are invested across geographic markets, as well as investments in infrastructure and Canadian real estate. The Nuclear Funds are invested to fund long-term liability requirements and, as such, the portfolio asset mix is structured to achieve the required return over a long-term horizon. While short-term fluctuations in market value will occur, managing the long-term return of the Nuclear Funds remains the primary goal.

### Used Fuel Fund

Under the ONFA, the Province guarantees OPG's annual return in the Used Fuel Fund at 3.25 percent plus the change in the Ontario CPI for funding related to the first 2.23 million of used fuel bundles (committed return). OPG recognizes the committed return on the Used Fuel Fund and includes it in the earnings on the nuclear fixed asset removal and nuclear waste management funds. The difference between the committed return on the Used Fuel Fund and the actual market return, based on the fair value of the Used Fuel Fund's assets, which includes realized and unrealized returns, is recorded as due to or due from the Province. The due to or due from the Province represents the amount the fund would pay to or receive from the Province if the committed return were to be settled as of the consolidated balance sheet date. As prescribed under the ONFA, OPG's contributions for incremental fuel bundles are not subject to the Province's guaranteed rate of return, but rather earn a return based on changes in the market value of the assets of the Used Fuel Fund.

As at December 31, 2013, the Used Fuel Fund asset value on a fair value basis was \$7,529 million. The Used Fuel Fund value included a due to the Province of \$990 million related to the committed return adjustment. As at December 31, 2012, the Used Fuel Fund asset value on a fair value basis was \$7,010 million, including a due to the Province of \$235 million related to the committed return adjustment.

Under the ONFA, the Province is entitled to any surplus in the Used Fuel Fund, subject to a threshold funded ratio of 110 percent compared to the value of the associated liabilities.

The nuclear fixed asset removal and nuclear waste management funds as at December 31 consist of the following:

	Fair Value	
(millions of dollars)	2013	2012
Decommissioning Fund	6,591	5,771
Due to Province – Decommissioning Fund	(624)	(64)
	5,967	5,707
Used Fuel Fund <sup>1</sup>	8,519	7,245
Due to Province – Used Fuel Fund	(990)	(235)
	7,529	7,010
Total Nuclear Funds	13,496	12,717
Less: current portion	25	27
Non-current Nuclear Funds	13,471	12,690

<sup>1</sup> The Ontario NFWA Trust represented \$2,668 million as at December 31, 2013 (2012 – \$2,559 million) of the Used Fuel Fund on a fair value basis.

The fair value of the securities invested in the Nuclear Funds as at December 31 is as follows:

	Fair Value	
(millions of dollars)	2013	2012
Cash and cash equivalents and short-term investments	262	335
Alternative investments	598	362
Pooled funds	2,173	2,093
Marketable equity securities	7,332	5,670
Fixed income securities	4,713	4,523
Net receivables/payables	32	41
Administrative expense payable	-	(8)
	15,110	13,016
Due to Province	(1,614)	(299)
	13,496	12,717

The bonds and debentures held in the Used Fuel Fund and the Decommissioning Fund as at December 31 mature according to the following schedule:

	Fair	Value
(millions of dollars)	2013	2012
1 – 5 years	1,334	1,151
5 – 10 years	871	631
More than 10 years	2,508	2,741
Fotal maturities of debt securities	4,713	4,523
Average yield	3.2%	2.7%

The change in the Nuclear Funds for the years ended December 31 is as follows:

	Fair Value	
(millions of dollars)	2013	2012
Decommissioning Fund haginning of year	5,707	5.342
Decommissioning Fund, beginning of year Increase in fund due to return on investments	854	469
Decrease in fund due to reimbursement of expenditures	(34)	(40)
Increase in due to Province	(560)	· · ·
	(380)	(64)
Decommissioning Fund, end of year	5,967	5,707
Used Fuel Fund, beginning of year	7,010	6.556
Increase in fund due to contributions made	184	182
Increase in fund due to return on investments	1,131	584
Decrease in fund due to reimbursement of expenditures	(41)	(30)
Increase in due to Province	(755)	(282)
Used Fuel Fund, end of year	7,529	7,010

The earnings from the Nuclear Funds during 2013 and 2012 were impacted by the Bruce Lease Net Revenues Variance Account authorized by the OEB. The earnings on the Nuclear Funds for the years ended December 31 are as follows:

(millions of dollars)	2013	2012
Decommissioning Fund Used Fuel Fund Bruce Lease Net Revenues Variance Account <i>(Note 5)</i>	294 376 (42)	405 302 (56)
Total earnings	628	651

# 9. INCOME TAXES

OPG follows the liability method of tax accounting for all of its business segments. The Company records an offsetting regulatory asset or liability for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers for generation from OPG's regulated facilities.

During 2013, OPG recorded a decrease in the deferred income tax liability for the income taxes that are expected to be recovered or refunded through regulated prices charged to customers of \$109 million (2012 – \$31 million). Since these deferred income taxes are expected to be refunded through future regulated prices, OPG recorded a corresponding decrease to the regulatory asset for deferred income taxes. As a result, the deferred income tax expense for 2013 and 2012 was not impacted.

The amount of taxes paid during 2013 was \$14 million (tax refund received net of taxes paid during 2012 – \$7 million).

The following table summarizes the deferred income tax liabilities recorded for the rate regulated operations that are expected to be recovered through future regulated prices:

523 176
176
699
(23)
( - )
(8)
(0)
668

A reconciliation between the statutory and the effective rate of income taxes is as follows:

(millions of dollars)	2013	2012
Income before income taxes	166	434
	100	434
Combined Canadian federal and provincial statutory enacted	00 5%	00 50/
income tax rates	26.5%	26.5%
Statutory income tax rates applied to accounting income	44	115
(Decrease) increase in income taxes resulting from:		
Income tax components of the regulatory variance and	(102)	(17)
deferral accounts		~ /
Non-taxable income items	(3)	(5)
Change in income tax positions	9	(11)
Regulatory asset for deferred income taxes	113	15
Scientific Research and Experimental Development	(30)	(28)
investment tax credits	(00)	(20)
Other	-	(2)
	(13)	(48)
	(10)	(10)
Income tax expense	31	67
Effective rate of income taxes	18.7%	15.4%

Significant components of the income tax expense are presented in the table below:

(millions of dollars)	2013	2012
Current income tax expense:		
Current payable	48	21
Change in income tax positions	9	(11)
Income tax components of the regulatory variance and deferral accounts	9	23
Scientific Research and Experimental Development investment tax credits	(30)	(28)
Other	7	-
	43	5
Deferred income tax (recovery) expense:		
Change in temporary differences	(14)	69
Income tax components of the regulatory variance and deferral accounts	(111)	(40)
Regulatory asset for deferred income taxes	113	33
	(12)	62
ncome tax expense	31	67

The income tax effects of temporary differences that give rise to deferred income tax assets and liabilities as at December 31 are as follows:

(millions of dollars)	2013	2012
Deferred income tax accetes		
Deferred income tax assets:	4.055	2 071
Fixed asset removal and nuclear waste management liabilities	4,055	3,871
Other liabilities and assets	1,672 30	2,006
Future recoverable Ontario minimum tax	5,757	<u> </u>
	5,757	5,914
Deferred income tax liabilities:		
Property, plant and equipment and intangible assets	(1,463)	(1,497)
Nuclear fixed asset removal and nuclear waste management funds	(3,374)	(3,179)
Other liabilities and assets	(1,499)	(1,733)
	(6,336)	(6,409)
Net deferred income tax liabilities	(579)	(495)
	(373)	(493)
Represented by:		
Current portion – (liability) asset	(14)	68
Long-term portion – liability	(565)	(563)
	(579)	(495)

The tax benefit associated with an income tax position is recognized only when it is more likely than not that such a position will be sustained upon examination by the taxing authorities based on the technical merits of the position. The current and deferred income tax benefit is equal to the largest amount, considering possible settlement outcomes, that is greater than 50 percent likely of being realized upon settlement with the taxing authorities.

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

(millions of dollars)	2013	2012
Opening balance, January 1 Additions based on tax positions related to the current year Reductions for tax positions of prior years	82 13 (4)	68 29 (15)
Closing balance, December 31	91	82

As at December 31, 2013, OPG's unrecognized tax benefits were \$91 million (2012 – \$82 million), excluding interest and penalties, all of which, if recognized, would affect OPG's effective tax rate. Changes in unrecognized tax benefits over the next 12 months cannot be predicted with certainty.

OPG recognizes interest and penalties related to unrecognized tax benefits as income tax expense. As at December 31, 2013, OPG has recorded interest on unrecognized tax benefits of \$10 million (2012 – \$7 million). OPG considers its significant tax jurisdiction to be Canada. OPG remains subject to income tax examination for years after 2008.

# 10. ACCUMULATED OTHER COMPREHENSIVE LOSS

The changes in the balance of each component of accumulated other comprehensive loss (AOCL), net of taxes, during the years ended December 31, 2013 and 2012 are as follows:

	For the year	ended December 31, 20	13
(millions of dollars)	Unrealized Gains and Losses on Cash Flow Hedges <sup>1</sup>	Pension and Other Post-Employment Benefits <sup>1</sup>	Total <sup>1</sup>
AOCL, beginning of year	(156)	(823)	(979)
Net gain on cash flow hedges	<b>`14</b> ´	-	<b>`14</b> ´
Actuarial gain and past service credits on remeasurement of liabilities for pension and other post-employment benefits	-	226	226
Amounts reclassified from AOCL	13	42	55
Other comprehensive income for the year	27	268	295
AOCL, end of year	(129)	(555)	(684)

All amounts are net of income taxes.

	For the year	ended December 31, 20	12
(millions of dollars)	Unrealized Gains and Losses on Cash Flow Hedges <sup>1</sup>	Pension and Other Post-Employment Benefits <sup>1</sup>	Total <sup>1</sup>
AOCL, beginning of year	(163)	(727)	(890)
Net loss on cash flow hedges	`(11)́	-	<b>`(11</b> )
Actuarial loss and past service credits on re-measurement of liabilities for pension and other post-employment benefits	-	(123)	(123)
Amounts reclassified from AOCL	18	27	45
Other comprehensive income (loss) for the year	7	(96)	(89)
AOCL, end of year	(156)	(823)	(979)

<sup>1</sup> All amounts are net of income taxes.

The significant amounts reclassified out of each component of AOCL, net of income taxes, during the years ended December 31, 2013 and 2012 are as follows:

Amount Reclassified from AOCL				
(millions of dollars)	2013	2012	Statement of Income Line Item	
Amortization of losses from cash flow hedges Losses Income tax expense	15 (2) 13	19 <u>(1)</u> 18	Net interest expense	
Amortization of amounts related to pension and other post-employment benefits Actuarial gains and past service costs Income tax (recoveries) expense	57 (15) 42	35 (8) 27	See (1) below	
Total reclassifications for the year	55	45		

<sup>1</sup> These AOCL components are included in the computation of pension and OPEB costs (see Note 11 for additional details).

# 11. PENSION AND OTHER POST-EMPLOYMENT BENEFITS

### **Fund Assets**

The OPG registered pension fund investment guidelines are stated in an approved Statement of Investment Policies and Procedures (SIPP). The SIPP is reviewed and approved by OPG's Audit and Finance Committee at least annually and includes a discussion regarding investment objectives and expectations, asset mix and rebalancing, and the basis for measuring the performance of the pension fund assets.

In accordance with the SIPP, investment allocation decisions are made with a view to achieve OPG's objective to meet obligations of the plan as they come due. The pension fund assets are invested in two categories of asset classes. The first category is liability hedging assets which are intended, over the long run, to hedge the inflation and interest rate sensitivity of the plan liabilities. The second category is return enhancing assets which are intended, over the long run, to obtain higher investment returns compared to the returns expected for liability hedging assets.

To achieve the above objective, OPG has adopted the following long-term asset mix and allowable ranges:

	Minimum	Target	Maximum
Asset Class			
Fixed income securities	26%	34%	46%
Equity securities	44%	54%	64%
Alternative investments	0%	12%	20%

The plan may enter into derivative securities, such as interest rate swaps and forward foreign exchange contracts, for risk management purposes, where such activity is consistent with its investment objective.

### Significant Concentrations of Risk in Fund Assets

The assets of the pension fund are diversified to limit the impact of any individual investment. The pension fund is diversified across multiple asset classes. Fixed income securities are diversified among Canadian structured bonds, real return bonds, and corporate bonds, and an interest rate overlay hedging program, which is disclosed under pooled funds. Equity securities are diversified across Canadian, US, and non-North American stocks. There are also real estate and infrastructure portfolios that are less than five percent of the total pension fund assets. Investments in the above asset classes are further diversified across funds, investment managers, strategies, vintages, sectors and geographies, depending on the specific characteristics of each asset class.

Credit risk with respect to the pension fund's fixed income securities is governed by the SIPP, which requires that fixed income securities comply with various investment constraints that ensure prudent diversification and prescribed minimum required credit rating quality. Credit risk, as it relates to the pension fund's derivatives, is managed through the use of International Swap and Derivatives Association (ISDA) documentation and counterparty management performed by the fund's investment managers.

# Risk Management

Risk management oversight with respect to the pension fund includes but is not limited to the following activities:

- Periodic asset/liability management and strategic asset allocation studies
- Monitoring of funding levels and funding ratios
- Monitoring compliance with asset allocation guidelines and investment management agreements
- Monitoring asset class performance against asset class benchmarks
- Monitoring investment manager performance against benchmarks.

#### Expected Rate of Return on Plan Assets

The expected rate of return on plan assets is based on current and expected asset allocation, as well as the expected return considering long-term historical risks and returns associated with each asset class within the plan portfolio. The asset management decisions consider the economic liabilities of the plan.

### Fair Value Measurements

OPG is required to classify fair value measurements using a fair value hierarchy. This hierarchy groups financial instruments into three levels, based on the significance of inputs used in measuring the fair value of the financial assets and liabilities. Refer to Note 13 for a detailed discussion of fair value measurements and the fair value hierarchy.

The following tables present pension plan assets measured at fair value in accordance with the fair value hierarchy:

		Decembe	r 31, 2013	
(millions of dollars)	Level 1	Level 2	Level 3	Total
Cash and cash equivalents	320	-	-	320
Short-term investments	-	5	-	5
Fixed income				
Corporate debt securities	-	315	-	315
Non-US government bonds	-	1,514	-	1,514
Equities				
Canadian	2,087	-	-	2,087
US	2,031	-	-	2,031
Foreign	2,357	-	-	2,357
Pooled funds	38	1,959	11	2,008
Infrastructure	-	-	208	208
Real estate	-	-	210	210
Other	-	2	-	2
	6,833	3,795	429	11,057 <sup>1</sup>

<sup>1</sup> The table above excludes pension fund receivables and payables.

		Decembe	r 31, 2012	
(millions of dollars)	Level 1	Level 2	Level 3	Total
Cash and cash equivalents	81	116	-	197
Short-term investments	-	5	-	5
Fixed income				
Corporate debt securities	-	308	-	308
Non-US government bonds	-	1,601	-	1,601
Equities				
Canadian	1,988	-	-	1,988
US	1,664	-	-	1,664
Foreign	1,907	-	-	1,907
Pooled funds	8	2,396	8	2,412
Infrastructure	-	_	160	160
Real estate	-	-	72	72
Other	-	5	-	5
	5,648	4,431	240	10,319

<sup>1</sup> The table above exclude pension fund receivables and payables.

The following tables present the changes in the fair value of financial instruments classified in Level 3:

	Fo Pooled	or the year ended	December 31, 20 <sup>.</sup>	13
(millions of dollars)	Funds	Infrastructure	Real Estate	Total
Opening balance, January 1, 2013 Total realized and unrealized gains	8 3	160 19	72 6	240 28
Purchases, sales, and settlements	-	29	132	161
Closing balance, December 31, 2013	11	208	210	429

	Pooled	For the year ended December				
(millions of dollars)	Funds	Infrastructure	Real Estate	Total		
Opening balance, January 1, 2012	7	86	52	145		
Total realized and unrealized gains	1	74	7	82		
Purchases, sales, and settlements	-	-	13	13		
Closing balance, December 31, 2012	8	160	72	240		

During the years ended December 31, 2013 and 2012, there were no transfers between Level 1 and Level 2.

# Plan Costs and Liabilities

Details of OPG's pension and OPEB obligations, pension fund assets and costs are presented in the following tables:

	Registe	ered and		
		tary Pension		Employment
	Pla	ans	Ber	efits
	2013	2012	2013	2012
Weighted Average Assumptions – Benefit Obligations at				
Year-End				
Rate used to discount future benefits	4.90%	4.30%	4.91%	4.32%
Salary schedule escalation rate	2.50%	2.50%	-	_
Rate of cost of living increase to pensions	2.00%	2.00%	-	-
Initial health care trend rate	-	-	6.19%	6.38%
Ultimate health care trend rate	-	-	4.34%	4.38%
Year ultimate health care trend rate reached	-	-	2030	2030
Rate of increase in disability benefits	-	-	2.00%	2.00%

	Registered and Supplementary Pension Plans			Employment efits	
	2013	2012	2013	2012	
Weighted Average Assumptions – Costs for the Year					
Expected return on plan assets, net of expenses	6.25%	6.50%	-	-	
Rate used to discount future benefits	4.30%	5.10%	4.32%	5.07%	
Salary schedule escalation rate	2.50%	3.00%	-	-	
Rate of cost of living increase to pensions	2.00%	2.00%	-	-	
Initial health care trend rate	-		6.38%	6.48%	
Ultimate health care trend rate	-		4.38%	4.38%	
Year ultimate health care trend rate reached	-		2030	2030	
Rate of increase in disability benefits	-	-	2.00%	2.00%	
Expected average remaining service life for employees (years)	13	12	14	13	

	Regis Pensior		Suppler Pensio		Other Emplo Bene	yment
(millions of dollars)	2013	2012	2013	2012	2013	2012
Components of Cost Recognized Current service costs Interest on projected benefit obligation Expected return on plan assets, net of expenses Amortization of past service costs <sup>1</sup> Amortization of net actuarial loss <sup>1</sup> Recognition of LTD net actuarial (gain) loss	291 589 (648) - 244 -	264 618 (668) - 144 -	10 13 - 6 -	9 14 - 4 -	86 138 - 1 48 (11)	78 139 - 2 31 10
Cost recognized <sup>2</sup>	476	358	29	27	262	260

<sup>1</sup> The amortization of past service costs and net actuarial loss was recognized as an increase to OCI. This increase was partially offset by the impact of the Pension and OPEB Regulatory Asset as discussed in Note 5.

<sup>2</sup> These pension and OPEB costs exclude the reduction of costs resulting from the recognition of additions to the regulatory assets for the Pension and OPEB Cost Variance Account and the Impact for USGAAP Deferral Account. The Pension and OPEB Cost Variance Account and the Impact for USGAAP Deferral Account are discussed in Note 5. Total benefit costs, including the impact of the Pension and OPEB Cost Variance Account and Impact for USGAAP Deferral Account, for the years ended December 31 are as follows:

(millions of dollars)	2013	2012
Registered pension plans	476	358
Supplementary pension plans	29	27
Other post-employment benefits	262	260
Pension and OPEB Cost Variance Account (Note 5)	(312)	(192)
Impact for USGAAP Deferral Account (Note 5)	-	(47)
Pension and other post-employment benefit costs	455	406

The pension and OPEB obligations and the pension fund assets measured as at December 31 are as follows:

	Registered Pension Plans		Suppler Pensior	•	Other Post- Employment Benefits	
(millions of dollars)	2013	2012	2013	2012	2013	2012
Change in Plan Assets						
Fair value of plan assets at beginning of year	10,337	9,604	_	_	_	_
Contributions by employer	306	375	14	16	87	83
Contributions by employees	74	77		-	-	-
Actual return on plan assets, net of	923	898	-	-	-	-
expenses		000				
Benefit payments	(679)	(617)	(14)	(16)	(87)	(83)
Friendlug of allow accords of and of more	40.004	40.007				
Fair value of plan assets at end of year	10,961	10,337	-	-	-	-
Change in Projected Benefit Obligations						
Projected benefit obligations at beginning of year	13,669	12,197	297	261	3,174	2,708
Employer current service costs	291	264	10	9	86	78
Contributions by employees	74	77	-	-	-	-
Interest on projected benefit obligation	589	618	13	14	138	139
Benefit payments	(679)	(617)	(14)	(16)	(87)	(83)
Past service credits	-	-	-	-	(2)	(7)
Net actuarial (gain) loss	(522)	1,130	(17)	29	(590)	339
Projected benefit obligations at end of year	13,422	13,669	289	297	2,719	3,174
rojected benefit obligations at end of year	10,422	13,009	203	291	2,715	5,174
Funded status – deficit at end of year	(2,461)	(3,332)	(289)	(297)	(2,719)	(3,174)

The following table provides the pension and OPEB liabilities and their classification on the consolidated balance sheets as at December 31:

	Registered Pension Plans		Supplen Pensior		Other Post- Employment Benefits	
(millions of dollars)	2013	2012	2013	2012	2013	2012
Current liabilities Non-current liabilities	- (2,461)	- (3,332)	(9) (280)	(8) (289)	(91) (2,628)	(98) (3,076)
Total liabilities	(2,461)	(3,332)	(289)	(297)	(2,719)	(3,174)

The accumulated benefit obligations for the registered pension plans and supplementary pension plans as at December 31, 2013 are \$12,242 million and \$237 million, respectively (2012 – \$12,366 million and \$242 million, respectively). The accumulated benefit obligation differs from the projected benefit obligation in that the accumulated benefit obligation about future compensation levels.

The following table provides the components of OPG's OCI related to pension and OPEB plans and the offsetting Pension and OPEB Regulatory Asset as discussed in Note 5 for the years ended December 31:

	Registered Pension Plans		Supplementary Pension Plans		Other Post- Employment Benefits	
(millions of dollars)	2013	2012	2013	2012	2013	2012
Changes in plan assets and benefit obligations recognized in OCI						
Current year past service credits	-	-	-	-	(2)	(7)
Current year net actuarial (gain) loss	(797)	900	(17)	29	(579)	329
Amortization of past service costs	-	-	-	-	(1)	(2)
Amortization of net actuarial loss	(244)	(144)	(6)	(4)	(48)	(31)
Total (increase) decrease in OCI	(1,041)	756	(23)	25	(630)	289
Less: (Decrease) increase in Pension	(814)	675	(18)	21	(504)	245
and OPEB Regulatory Asset (Note 5)						
Net (increase) decrease in OCI	(227)	81	(5)	4	(126)	44

The following table provides the components of OPG's AOCI and the offsetting Pension and OPEB Regulatory Asset that have not yet been recognized as components of benefit costs as at December 31:

	Registered Pension Plans		Supplementary Pension Plans		Other Post- Employment Benefits	
(millions of dollars)	2013	2012	2013	2012	2013	2012
Unamortized amounts recognized in AOCI						
Past service costs	-	-	-	-	1	4
Net actuarial loss	3,496	4,537	79	102	323	950
Total recognized in AOCI	3,496	4,537	79	102	324	954
Less: Pension and OPEB Regulatory Asset (Note 5)	2,831	3,645	64	82	263	767
Net recognized in AOCI	665	892	15	20	61	187

The following table provides the components of OPG's AOCI and the offsetting Pension and OPEB Regulatory Asset as at December 31 (included in the table above) that are expected to be amortized as components of benefit costs and recognized as increases to OCI and reductions in the Pension and OPEB Regulatory Asset, related to the currently regulated facilities, in 2014:

(millions of dollars)	Registered Pension Plans	Supplementary Pension Plans	Other Post- Employment Benefits
Net actuarial loss	260	4	6
Total increase in AOCI	260	4	6
Less: Estimated decrease in Pension and OPEB	211	3	5
Regulatory Asset, Related to the Currently Regulated			
Facilities			
Net increase in AOCI	49	1	1

Based on the most recently filed actuarial valuation, for funding purposes, of the OPG registered pension plan, as at January 1, 2011, there was an unfunded liability on a going-concern basis of \$555 million and a deficiency on a windup basis of \$5,663 million. In the previously filed actuarial valuation, as at January 1, 2008, there was an unfunded liability on a going-concern basis of \$239 million and a deficiency on a wind-up basis of \$2,846 million. The funded status to be determined in the next filed funding valuation, which must have an effective date no later than January 1, 2014 and be filed by September 30, 2014, could be significantly different. OPG's 2014 contribution to its registered pension plan will be determined as part of the funding valuation which is required to be filed by September 30, 2014. The amount of OPG's additional voluntary contribution, if any, is revisited from time to time. OPG will continue to assess the requirements for contributions to the pension plan.

Based on the most recently filed actuarial valuation, for funding purposes, of the NWMO registered pension plan, as at January 1, 2013, there was a surplus on a going-concern basis of \$14 million and a deficiency on a wind-up basis of \$15 million. In the previously filed actuarial valuation, as at January 1, 2012, there was a surplus on a going-concern basis of \$8 million and a deficiency on a wind-up basis of \$15 million. The next filed funding valuation must have an effective date no later than January 1, 2014.

The supplementary pension plans are not funded, but are secured by Letters of Credit totalling \$302 million as at December 31, 2013 (2012 – \$332 million).

Estimated future benefit payments to participants in the pension and OPEB plans based on the assumptions used to measure the benefit obligations as at December 31, 2013 are as follows:

(millions of dollars)	Registered Pension Plans	Supplementary Pension Plans	Other Post- Employment Benefits
2014	521	9	91
2015	551	10	96
2016	582	11	100
2017	589	12	105
2018	634	13	110
2019 through 2023	3,658	79	625

A one percent increase or decrease in the health care trend rate would result in an increase in the current service and interest components of the 2013 OPEB cost recognized of \$54 million (2012 – \$48 million) or a decrease in the service and interest components of the 2013 OPEB cost recognized of \$39 million (2012 – \$36 million). A one percent increase or decrease in the health care trend rate would result in an increase in the projected OPEB obligation at December 31, 2013 of \$472 million (2012 – \$604 million) or a decrease in the projected OPEB obligation at December 31, 2013 of \$472 million (2012 – \$604 million) or a decrease in the projected OPEB obligation at December 31, 2013 of \$472 million (2012 – \$456 million).

# 12. DERIVATIVES

OPG is exposed to risks related to changes in electricity prices associated with a wholesale spot market for electricity in Ontario, changes in market interest rates on debt expected to be issued in the future, and movements in foreign currency that affect its assets, liabilities, and forecasted transactions. Select derivative instruments are used to manage such risks. Derivatives are used as hedging instruments, as well as for trading purposes.

Interest rate risk is the risk that the value of assets and liabilities can change due to movements in related interest rates. Interest rate risk for OPG arises with the need to refinance existing debt and/or undertake new financing. The management of these risks is undertaken by using derivatives to hedge the exposure in accordance with corporate risk management policies. OPG periodically uses interest rate swap agreements to mitigate elements of interest rate risk exposure associated with anticipated financing.

The LME has entered into forward start interest rate swaps to hedge against the effect of future changes in interest rates for long-term debt for the Lower Mattagami River project.

Electricity price risk for the Company is the potential for adverse movements in the market price of electricity. Exposure to electricity price risk is reduced as a result of regulated prices and other contractual arrangements for a significant portion of OPG's business. The majority of this exposure should be mitigated with the implementation of a regulated price for most of OPG's currently unregulated hydroelectric facilities, which have been regulated by the OEB effective July 1, 2014.

The conditional reduction to revenue in the future, embedded in the terms of the Bruce Lease, is treated as a derivative. Assumptions related to future electricity prices impact the valuation of the derivative liability embedded in the Bruce Lease.

OPG's foreign exchange exposure is attributable to two primary factors: US dollar denominated transactions such as the purchase of fuels; and the influence of US dollar denominated commodity prices on Ontario electricity market prices. OPG enters into foreign exchange derivatives and agreements with major financial institutions, when necessary, in order to manage the Company's exposure to foreign currency movements.

The majority of OPG's revenues are derived from sales through the IESO-administered spot market. Although the credit exposure to the IESO represents a significant portion of OPG's accounts receivable, the Company's management accepts this risk due to the IESO's primary role in the Ontario electricity market. The remaining receivables exposure is to a diverse group of generally high quality counterparties. OPG's allowance for doubtful accounts as at December 31, 2013 was less than \$1 million.

The following is a summary of OPG's derivative instruments:

(millions of dollars except where noted)	Notional Quantity	Terms	Fair Value	Balance Sheet Line Item
As at December 31, 2013				
Commodity derivative instruments	5.0 TWh	1 year	10	Other accounts receivable and prepaid expenses
Foreign exchange derivative instruments	37	within 1 year	1	Other accounts receivable and prepaid expenses
Commodity derivative instruments	2.8 TWh	1 year	(11)	Accounts payable and accrued charges
Cash flow hedges – Forward start interest rate swaps	100	1 - 10 years	(8)	Long-term accounts payable and accrued charges
Derivative embedded in the Bruce Lease	n/a	6 years	(346)	Long-term accounts payable and accrued charges
Total derivatives			(354)	

(millions of dollars except where noted)	Notional Quantity	Terms	Fair Value	Balance Sheet Line Item
As at December 31, 2012				
Commodity derivative instruments	4.3 TWh	1 - 2 years	7	Other accounts receivable and prepaid expenses
Foreign exchange derivative instruments	63	within 1 year	(1)	Accounts payable and accrued charges
Commodity derivative instruments	2.0 TWh	1 - 2 years	(4)	Accounts payable and accrued charges
Cash flow hedges – Forward start interest rate swaps	410	1 - 12 years	(66)	Long-term accounts payable and accrued charges
Derivative embedded in the Bruce Lease	n/a	7 years	(392)	Long-term accounts payable and accrued charges
Total derivatives			(456)	

The following table shows the amount related to derivatives recorded in AOCL and income for the years ended December 31:

(millions of dollars)	2013	2012
Cash flow hedges		
Gain (loss) in OCI	17	(12)
Reclassification of losses to net interest expense	18	12
Reclassification of gains to fuel expense	(3)	7
Commodity derivatives		
Realized losses in revenue	(7)	(2)
Unrealized losses in revenue	(4)	(2)
Embedded derivative		. ,
Unrealized losses in revenue <sup>1</sup>	(33)	(284)

<sup>1</sup> Excludes the impact of the Bruce Lease Net Revenues Variance Account.

Existing net losses of \$19 million deferred in AOCL as at December 31, 2013 are expected to be reclassified to net income within the next 12 months.

# 13. FAIR VALUE MEASUREMENTS

OPG is required to classify fair value measurements using a fair value hierarchy. This hierarchy groups financial assets and liabilities into three levels, based on the significance of inputs used in measuring the fair value of the financial assets and liabilities. The level within which the financial asset or liability is classified is determined based on the attribute of significance to the inputs to the fair value measurement. The fair value hierarchy has the following levels:

- Level 1: Valuation of inputs is based on unadjusted quoted market prices observed in active markets for identical assets or liabilities.
- Level 2: Valuation is based on inputs other than quoted prices under Level 1 that are observable for the asset or liability, either directly or indirectly.
- Level 3: Valuation is based on inputs for the asset or liability that are not based on observable market data.

The fair value of financial instruments traded in active markets is based on quoted market prices at the consolidated balance sheet dates. A market is regarded as active if quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service, or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis. The quoted market price used for financial assets held by OPG is the current bid price. These instruments are included in Level 1 and are comprised primarily of equity investments and fund investments.

For financial instruments for which quoted market prices are not directly available, fair values are estimated using forward price curves developed from observable market prices or rates. The estimation of fair value may include the use of valuation techniques or models, based wherever possible on assumptions supported by observable market prices or rates prevailing at the consolidated balance sheet dates. This is the case for over-the-counter derivatives and securities, which include energy commodity derivatives, foreign exchange derivatives, interest rate swap derivatives, and fund investments. Pooled fund investments are valued at the unit values supplied by the pooled fund administrators. The unit values represent the underlying net assets at fair values, determined using closing market prices. Valuation models use general assumptions and market data and therefore do not reflect the specific risks and other factors that would affect a particular instrument's fair value. The methodologies used for calculating the fair value adjustments are reviewed on an ongoing basis to ensure that they remain appropriate. If all significant inputs required to fair value an instrument are observable, the instrument is included in Level 2.

If one or more of the significant inputs is not based on observable market data, the instrument is included in Level 3. Specific valuation techniques are used to value these instruments. Significant Level 3 inputs include: recent comparable transactions, comparable benchmark information, bid/ask spread of similar transactions, and other relevant factors.

Transfers into, out of, or between levels are deemed to have occurred on the date of the event or change in circumstances that caused the transfer to occur.

The Company is required to determine the fair value of all its financial instruments. The following is a summary of OPG's financial instruments as at December 31:

(millions of dollars except where noted)	Fair Value	Carrying Value <sup>1</sup>	Balance Sheet Line Item
As at December 31, 2013			
Commodity derivative instruments	10	10	Other accounts receivable and prepaid expenses
Investment in OPG Ventures Inc. Nuclear fixed asset removal and nuclear waste management funds (includes current portion)	9 13,496	9 13,496	Other long-term assets Nuclear fixed asset removal and nuclear waste management funds
Foreign exchange derivative instruments	1	1	Other accounts receivable and prepaid expenses
Commodity derivative instruments Cash flow hedges - Forward start interest rate swaps	(11) (8)	(11) (8)	Accounts payable and accrued charges Long-term accounts payable and accrued charges
Payable related to cash flow hedges	(56)	(56)	Long-term accounts payable and accrued charges
Derivative embedded in the Bruce Lease	(346)	(346)	Long-term accounts payable and accrued charges
ong-term debt (includes current portion)	(5,955)	(5,625)	Long-term debt
As at December 31, 2012			
Commodity derivative instruments	7	7	Other accounts receivable and prepaid expenses
nvestment in OPG Ventures Inc.	10	10	Other long-term assets
Nuclear fixed asset removal and nuclear waste management funds (includes current portion)	12,717	12,717	Nuclear fixed asset removal and nuclear waste management funds
Foreign exchange derivative instruments	(1)	(1)	Accounts payable and accrued charges
Commodity derivative instruments	(4)	(4)	Accounts payable and accrued charges
Cash flow hedges - Forward start interest rate swaps	(66)	(66)	Long-term accounts payable and accrued charges
Payable related to cash flow hedges	(24)	(24)	Long-term accounts payable and accrued charges
Derivative embedded in the Bruce Lease	(392)	(392)	Long-term accounts payable and accrued charges
ong-term debt (includes current portion)	(5,751)	(5,114)	Long-term debt

The carrying values of other financial instruments included in cash and cash equivalents, receivables from related parties, other accounts receivable and prepaid expenses, and accounts payable and accrued charges approximate their fair values due to the immediate or short-term maturity of these financial instruments.

The fair value of long-term debt instruments is determined based on a conventional pricing model, which is a function of future cash flows, the current market yield curve and term to maturity. These inputs are considered Level 2 inputs.

The following tables present financial assets and liabilities measured at fair value in accordance with the fair value hierarchy:

		December	r 31, 2013	
(millions of dollars)	Level 1	Level 2	Level 3	Total
Assets				
	3,005	2,715	247	5,967
Decommissioning Fund Used Fuel Fund	526	6,961	42	7,529
	526	0,901		1,529
Commodity derivative instruments	Э	2	3 9	
Investment in OPG Ventures Inc.	-	-	9	9
Foreign exchange derivative instruments	-	1	-	1
Total	3,536	9,679	301	13,516
Liabilities				
Derivative embedded in the Bruce Lease	-	-	(346)	(346)
Forward start interest rate swaps	-	(8)	-	<b>`</b> (8)
Commodity derivative instruments	(8)	(3)	-	(11)
Total	(8)	(11)	(346)	(365)
Net assets (liabilities)	3,528	9,668	(45)	13,151

		December	r 31, 2012	
(millions of dollars)	Level 1	Level 2	Level 3	Total
Assets				
Decommissioning Fund	2,596	2,948	163	5,707
Used Fuel Fund	212	6,785	13	7,010
Commodity derivative instruments	2	2	3	7
Investment in OPG Ventures Inc.	-	-	10	10
Total	2,810	9,735	189	12,734
Liabilities				
Derivative embedded in the Bruce Lease	-	-	(392)	(392)
Forward start interest rate swaps	-	(66)	-	(66)
Commodity derivative instruments	(3)	(1)	-	(4)
Foreign exchange derivative instruments	_	(1)	-	(1)
Total	(3)	(68)	(392)	(463)
Net assets (liabilities)	2,807	9,667	(203)	12,271

During the year ended December 31, 2013, there were no transfers between Level 1 and Level 2. In addition, there were no transfers into and out of Level 3.

The following tables present the changes in OPG's assets and liabilities measured at fair value based on Level 3:

	For the year ended December 31, 2013						
				Derivative			
	Decom-		Investment	Embedded	Commodity		
	missioning	Used Fuel	in OPG	in the Bruce	Derivative		
(millions of dollars)	Fund	Fund	Ventures Inc.	Lease <sup>1</sup>	Instruments		
	400	40	40	(200)	•		
Opening balance, January 1, 2013	163	13	10	(392)	3		
Unrealized gains included in earnings on nuclear fixed asset removal and nuclear waste management funds <sup>1</sup>	18	3	-	-	-		
Unrealized losses included in revenue	-	-	(1)	(33)	-		
Realized losses included in revenue	(1)	-	-	-	(2)		
Purchases	83	14	-	-	2		
Sales	(3)	-	-	-	-		
Settlements	(13)	12	-	79	-		
Closing balance, December 31, 2013	247	42	9	(346)	3		

<sup>1</sup> Total gains (losses) exclude the impact of regulatory assets and liabilities.

	For the year ended December 31, 2012 Derivative						
(millions of dollars)	Decom- missioning Fund	Used Fuel Fund	Investment in OPG Ventures Inc.	Embedded in the Bruce Lease <sup>1</sup>	Commodity Derivative Instruments		
Opening balance, January 1, 2012	98	6	16	(186)	2		
Unrealized gains included in earnings on nuclear fixed asset removal and nuclear waste management funds <sup>1</sup>	11	1	-	-	-		
Unrealized losses included in revenue	-	-	(5)	(284)	(1)		
Realized losses included in revenue	-	-	-	-	(5)		
Purchases	58	6	-	-	7		
Sales	(2)	-	-	-	-		
Settlements	(2)	-	(1)	78	-		
Closing balance, December 31, 2012	163	13	10	(392)	3		

<sup>1</sup> Total gains (losses) exclude the impact of regulatory assets and liabilities.

### **Derivative Embedded in the Bruce Lease**

The revenue from the Bruce Lease is reduced in each calendar year where the expected future annual arithmetic average hourly Ontario electricity price falls below \$30/MWh and certain other conditions are met. The conditional reduction to revenue in the future, embedded in the terms of the Bruce Lease, is treated as a derivative.

Due to an unobservable input used in the pricing model of the Bruce Lease embedded derivative, the measurement of the liability is classified within Level 3.

The following table presents the quantitative information about the Level 3 fair value measurement of the Bruce Lease embedded derivative as at December 31, 2013:

(millions of dollars except where noted)	Fair Value	Valuation Technique	Unobservable Input	Range
Derivative embedded in the Bruce Lease	(346)	Option model	Risk Premium <sup>1</sup>	0% - 30%

<sup>1</sup> Represents the range of premiums used in the valuation analysis that OPG has determined market participants would use when pricing the derivative.

The term related to the derivative embedded in the Bruce Lease is based on the remaining service lives, for accounting purposes, for certain units of the Bruce generating stations. In 2012, the service life of these Bruce units was extended to 2019. The service life extension accounted for \$249 million of the total increase in the derivative liability during 2012. OPG's exposure to changes in the fair value of the Bruce Lease embedded derivative is mitigated as part of the OEB regulatory process, since the revenue from the lease of the Bruce generating stations is included in the determination of regulated prices and is subject to the Bruce Lease Net Revenues Variance Account. As such, the pre-tax income statement impact, as a result of changes in the derivative liability, is offset by the pre-tax income statement impact of the Bruce Lease Net Revenues Variance Account.

### **Decommissioning Fund and Used Fuel Fund**

Nuclear Funds investments classified as Level 3 consist of real estate and infrastructure investments within the alternative investment portfolio. The fair value of the investments within the Nuclear Funds' alternative investment portfolio is determined using appropriate valuation techniques, such as recent arm's length market transactions, reference to current fair values of other instruments that are substantially the same, discounted cash flow analyses, third-party independent appraisals, valuation multiples, or other valuation methods. Any control, size, liquidity or other discounts or premiums on the investments are considered in the determination of fair value.

The process of valuing investments for which no published market price exists is based on inherent uncertainties and the resulting values may differ from values that would have been used had a ready market existed for the investments. The values may also differ from the prices at which the investments may be sold.

The following are the classes of investments within the Nuclear Funds that are reported on the basis of net asset value as at December 31, 2013:

(millions of dollars except where noted)	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice
Infrastructure	312	241	n/a	n/a
Real Estate	286	373	n/a	n/a
Pooled Funds				
Short-term Investments	27	-	Daily	1 - 5 Days
Fixed Income	519	-	Daily	1 - 5 Days
Equity	1,627	-	Daily	1 - 5 Days
Total	2,771	614		

The fair value of the above investments is classified as either Level 2 or Level 3.

### **Infrastructure**

This class includes investments in funds whose investment objective is to generate a combination of long-term capital appreciation and current income generally through investments such as energy, transportation and utilities.

The fair values of investments in this class have been estimated using the Nuclear Funds' ownership interest in partners' capital and/or underlying investments held by subsidiaries of an infrastructure fund.

The investments in the respective infrastructure funds are not redeemable. However, the Nuclear Funds may transfer any of its partnership interests/shares to another party, as stipulated in the partnership agreements and/or shareholders' agreements. Distributions from each infrastructure fund will be received based on the operations of the underlying investments and/or as the underlying investments of the infrastructure funds are liquidated. It is not possible to estimate when the underlying assets of the infrastructure funds will be liquidated. However, the infrastructure funds have a maturity end period ranging from 2019 to 2025.

### Real Estate

This class includes investment in institutional-grade real estate property located in Canada. The investment objective is to provide a stable level of income with the opportunity for long-term capital appreciation.

The fair values of the investments in this class have been estimated using the net asset value of the Nuclear Funds' ownership interest in these investments.

The partnership investments are not redeemable. However, the Nuclear Funds may transfer any of their partnership interests to another party, as stipulated in the partnership agreement, with prior written consent of the other limited partners. For investments in private real estate corporations, shares may be redeemed through a pre-established redemption process. It is not possible to estimate when the underlying assets in this class will be liquidated.

#### Pooled Funds

This class represents investments in pooled funds, which primarily include a diversified portfolio of fixed income securities, issued mainly by Canadian corporations and diversified portfolios of US and Emerging Market listed equity and fixed income securities. The investment objective of the pooled funds is to achieve capital appreciation and income through professionally managed portfolios.

The fair value of the investments in this class has been estimated using the net asset value per share of the investments.

There are no significant restrictions on the ability to sell investments in this class.

#### Investment in OPG Ventures Inc.

Significant Level 3 inputs used in the fair value measurement of the OPG Ventures Inc. investments include recent comparable transactions, comparable benchmark information, bid/ask spread of similar transactions, and other relevant factors. Significant increases (decreases) in any of those inputs in isolation would result in significantly higher (lower) fair value measurement.

### 14. COMMON SHARES

As at December 31, 2013 and 2012, OPG had 256,300,010 common shares issued and outstanding at a stated value of \$5,126 million. OPG is authorized to issue an unlimited number of common shares without nominal or par value. Any issue of new shares is subject to the consent of OPG's shareholder.

### **15. COMMITMENTS AND CONTINGENCIES**

#### Litigation

Various legal proceedings are pending against OPG or its subsidiaries, covering a wide range of matters that arise in the ordinary course of its business activities.

On August 9, 2006, a Notice of Action and Statement of Claim filed with the Ontario Superior Court of Justice in the amount of \$500 million was served on OPG and Bruce Power L.P. by British Energy Limited and British Energy International Holdings Limited (together British Energy). The British Energy claim against OPG pertains to corrosion in the Bruce Unit 8 Steam Generators, in particular, erosion of the support plates through which the boiler tubes pass. The claim amount includes \$65 million due to an extended outage to repair some of the alleged damage. The balance of the amount claimed is based on an increased probability the steam generators will have to be replaced or

the unit taken out of service prematurely. OPG leased the Bruce nuclear generating stations to Bruce Power L.P. in 2001.

British Energy is defending an arbitration commenced by some of the current owners of Bruce Power L.P. regarding an alleged breach of British Energy's representations and warranties to the claimants when they purchased British Energy's interest in Bruce Power L.P. (the Arbitration). In the second quarter of 2012, the arbitrator released an interim award. The arbitrator found that British Energy was liable to the claimants for some of the damages they claimed. The arbitrator determined what elements of the claim British Energy was liable for, but did not award a specific amount in damages as it was found that further evidence from the parties is necessary to quantify the exact amount of the damages. If the parties to the Arbitration cannot agree on the quantum of damages, there will be further proceedings before the arbitrator to determine the amount. British Energy counsel has indicated that the damages payable to the claimants will likely be less than \$70 million.

British Energy previously indicated that they did not require OPG or Bruce Power L.P. to actively defend the court action until the conclusion of the Arbitration. Although the Arbitration had not concluded, British Energy requested that OPG file a Statement of Defense. OPG and Bruce Power L.P. advised British Energy that if British Energy wishes the court action to proceed prior to the conclusion of the Arbitration, the defendants would bring a motion for a Stay of proceedings, a Dismissal of the current action or, in the alternative, a motion to extend the time for service of the Statement of Defense until the conclusion of the Arbitration. That motion was scheduled to be heard on March 5, 2010, but was adjourned at the request of British Energy. The return date of that motion is yet to be set.

Certain First Nations have commenced actions against OPG for interference with their respective reserve and traditional land rights. As well, OPG has been brought into certain actions by the First Nations against other parties as a third party defendant. Each of these matters is subject to various uncertainties. Some of these matters may be resolved unfavourably.

While it is not possible to determine the ultimate outcome of the various pending actions, it is the Company's belief that their resolution is not likely to have a material adverse impact on its financial position.

### Environmental

Current operations are subject to regulation with respect to emissions to air, water, and land as well as other environmental matters by federal, provincial, and local authorities. The cost of obligations associated with current operations is provided for on an ongoing basis. Management believes it has made adequate provision in the consolidated financial statements to meet certain other environmental obligations. As at December 31, 2013, OPG's environmental liabilities were \$15 million (2012 – \$17 million).

### **Guarantees**

The Company and its joint venture partners have jointly guaranteed the financial performance of jointly owned entities related primarily to the payment of liabilities. As at December 31, 2013, the total amount of guarantees OPG provided to these entities was \$76 million. OPG may terminate some of these guarantees within a short time frame by providing written notice to the counterparties at any time. Other guarantees have terms ending between 2019 and 2029. The potential impact of the fair value of these guarantees to income has been estimated as at December 31, 2013 to be negligible. As at December 31, 2013, OPG does not expect to make any payments associated with these guarantees.

# **Contractual and Commercial Commitments**

OPG's contractual obligations and other significant commercial commitments as at December 31, 2013, are as follows:

(millions of dollars)	2014	2015	2016	2017	2018	Thereafter	Total
Contractual obligations:							
Fuel supply agreements	183	208	163	143	126	159	982
Contributions under the ONFA <sup>1</sup>	139	143	150	163	193	2,706	3,494
Long-term debt repayment	5	593	273	1,103	398	3,253	5,625
Interest on long-term debt	262	256	242	223	167	2,104	3,254
Unconditional purchase obligations	98	97	8	-	-	-	203
Operating lease obligations	16	17	15	15	13	70	146
Commitments related to Darlington refurbishment <sup>2</sup>	200	-	-	-	-	-	200
Pension contributions <sup>3</sup>	300	-	-	-	-	-	300
Operating licence	41	25	25	25	26	-	142
Other - primarily accounts payable	449	33	14	13	12	69	590
	1,693	1,372	890	1,685	935	8,361	14,936
Significant commercial commitments:							
Niagara Tunnel	5	-	-	-	-	-	5
Lower Mattagami	298	65	-	-	-	-	363
Atikokan	16	-	-	-	-	-	16
Total	2,012	1,437	890	1,685	935	8,361	15,320

<sup>1</sup> Contributions under the ONFA are based on the 2012 ONFA Reference Plan contribution schedule approved in 2012.

<sup>2</sup> Estimated currently committed costs to close the project, including demobilization of project staff and cancellation of existing contracts, and material orders.

<sup>3</sup> The pension contributions include ongoing funding requirements and additional funding requirements towards the deficit, in accordance with the actuarial valuation of the OPG registered pension plan as at January 1, 2011. The next actuarial valuation of the OPG plan must have an effective date no later than January 1, 2014. The pension contributions are affected by various factors including market performance, changes in actuarial assumptions, plan experience, changes in the pension regulatory environment, and the timing of funding valuations. Funding requirements after 2014 for the OPG registered pension plan are excluded due to significant variability in the assumption required to project the timing of future cash flows. The amount of OPG's additional voluntary contribution, if any, is revisited from time to time.

### Niagara Tunnel

In March 2013, the 10.2 kilometre Niagara Tunnel was filled with water and declared in-service, approximately nine months ahead of the approved project completion date of December 2013. The capital project expenditures for 2013 were \$87 million and the life-to-date capital expenditures as at December 31, 2013 were \$1.46 billion. The project is debt financed through the OEFC. Total costs of the project after closure activities are expected to be below \$1.5 billion, compared to the approved budget of \$1.6 billion.

### Lower Mattagami

The Lower Mattagami River project will increase the capacity of the four generating stations on the Lower Mattagami River by 438 MW. The capital project expenditures for the year ended December 31, 2013 were \$629 million and the life-to-date expenditures were \$1.98 billion. The project budget of \$2.6 billion includes the design-build contract, as well as contingencies, interest, and other OPG costs, including project management, contract management, impact agreements with First Nations, and transmission connection costs.

### Atikokan Biomass Conversion

OPG is in the process of converting the Atikokan generating station from coal to biomass fuel. The converted station is expected to have a capacity of 200 MW. The capital project expenditures for the year ended December 31, 2013 were \$85 million and the life-to-date expenditures were \$144 million. The conversion project has an approved cost estimate of \$170 million and is expected to be completed by August 2014.

Filed: 2016-05-27 EB-2016-0152 Exhibit A2-1-1 Attachment 1 Page 138 of 152

### Darlington Refurbishment

As of December 31, 2013, OPG has issued contracts valued at approximately \$1.5 billion related to the refurbishment of the Darlington nuclear station. These contracts contain suspension and termination provisions. The most significant contracts include the Retube and Feeder Replacement (RFR) contract, and the Turbine Generator contract.

In March 2013, OPG awarded the Turbine Generator contract for equipment supply and technical services, valued at approximately \$350 million. In March 2012, OPG awarded a RFR contract, with an estimated value at over \$600 million.

OPG signed the contract for the primary and secondary side cleaning of the Steam Generators in December 2013. The contract for the engineering integration and field installation portion of the Turbine Generator scope of work was signed in February 2014.

Capital project expenditures for 2013 were \$431 million and the life-to-date capital expenditures as at December 31, 2013 were \$793 million. A detailed cost and schedule estimate for the refurbishment of the four units is expected to be completed in 2015.

# Lease Commitments

The Company is party to various leases for real estate and equipment under operating lease arrangements. Real estate and transport equipment base rent expense for the year ended December 31, 2013 was \$15 million (2012 – \$16 million).

The Company leases Bruce A and B nuclear generating stations to Bruce Power L.P. until 2018, with Bruce Power L.P. having an option to renew for up to 25 years thereafter.

As per Ontario Regulation 53/05 pursuant to the Ontario Energy Board Act, 1998, the difference between OPG's revenues, including lease revenues, and costs, including depreciation expense, associated with its ownership of the Bruce A and B nuclear generating stations is included in the determination of OPG's nuclear regulated prices established by the OEB. These revenues and costs are determined on the basis of the manner in which they are recognized in OPG's consolidated financial statements. As the Bruce assets are not prescribed facilities under Ontario Regulation 53/05, the net book value of the Bruce assets is not included in the rate base.

During 2013, OPG recorded lease revenue related to the Bruce generating stations of \$176 million (2012 – \$164 million), which included supplemental rent from Bruce Power L.P. of \$125 million (2012 – \$113 million). The amount of supplemental rent shown was net of a required rebate of \$79 million (2012 – \$78 million). The net book value of property, plant and equipment on lease to Bruce Power L.P. as at December 31, 2013 was \$1,859 million (2012 – \$1,963 million).

Base rent payments as stipulated in the lease agreement due to the Company from Bruce Power L.P. are as follows:

(millions of dollars)	
2014	83
2015	83 85
2015 2016	88
2017	90
2018	92
	438

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#### Other Commitments

The Company maintains labour agreements with the Power Workers' Union (PWU) and the Society of Energy Professionals (The Society). As at December 31, 2013, OPG had approximately 10,270 regular employees and about 89 percent of its regular labour force was covered by the collective bargaining agreements. The current collective agreement between OPG and the PWU has a three-year term, which expires on March 31, 2015. The Company's most recent collective agreement with The Society was established through an arbitration award issued on April 8, 2013. The collective agreement between OPG and The Society expires on December 31, 2015. The Society filed a Judicial Review Application in the second quarter of 2013 to the Superior Court of Ontario in the matter of the arbitration award.

Contractual and commercial commitments as noted exclude certain purchase orders, as they represent purchase authorizations rather than legally binding contracts, and are subject to change without significant penalties.

### **Proxy Property Taxes**

In November 2005, OPG received a letter from the Ministry of Finance (MOF) indicating its intent to recommend to the Minister of Finance that an Ontario regulation covering proxy property taxes be updated retroactive to April 1, 1999, to reflect reassessments and appeal settlements of certain OPG properties since that date. OPG continues to monitor the resolution to this issue with the MOF, as updates to the regulation may not occur for several years. OPG has not recorded any amounts relating to this anticipated regulation change.

### 16. BUSINESS SEGMENTS

OPG has five reportable business segments. The business segments are: Regulated – Nuclear Generation, Regulated – Nuclear Waste Management, Regulated – Hydroelectric, Unregulated – Hydroelectric, and Unregulated – Thermal.

#### **Regulated – Nuclear Generation Segment**

OPG's Regulated – Nuclear Generation business segment operates in Ontario, generating and selling electricity from the nuclear generating stations that it owns and operates. The business segment includes electricity generated by the Pickering and Darlington nuclear generating stations. This business segment also includes revenue under the terms of a lease arrangement and related agreements with Bruce Power L.P. related to the Bruce nuclear generating stations. This revenue includes lease revenue and revenue from services such as heavy water sales and detribution. Revenue is also earned from isotope sales and ancillary services. Ancillary revenues are earned through voltage control and reactive support. Revenues under the agreements with Bruce Power and from isotope sales and ancillary services are included by the OEB in the determination of the regulated prices for OPG's nuclear facilities.

### **Regulated – Nuclear Waste Management Segment**

OPG's Regulated – Nuclear Waste Management segment engages in the management of used nuclear fuel and L&ILW, the decommissioning of OPG's nuclear generating stations (including the stations on lease to Bruce Power L.P.), the management of the Nuclear Funds, and related activities including the inspection and maintenance of the waste storage facilities. Accordingly, accretion expense on the Nuclear Liabilities and earnings from the Nuclear Funds are reported under this segment.

As the nuclear generating stations operate over time, OPG incurs variable costs related to nuclear used fuel bundles and L&ILW generated. These costs increase the Nuclear Liabilities through the generation of additional used nuclear fuel bundles and L&ILW. These variable costs are charged to current operations in the Regulated – Nuclear Generation segment to reflect the cost of producing energy and earning revenue under the Bruce Lease and related agreements. Since variable costs increase the Nuclear Liabilities in the Regulated – Nuclear Waste Management segment, OPG records an inter-segment charge between the Regulated – Nuclear Generation and the Regulated – Nuclear Waste Management segments. The impact of the inter-segment charge is eliminated on OPG's consolidated statements of income and balance sheets.

The Regulated – Nuclear Waste Management segment is considered regulated because the costs associated with the Nuclear Liabilities are included by the OEB in the determination of regulated prices for production from OPG's regulated nuclear facilities.

#### Regulated – Hydroelectric Segment

OPG's Regulated – Hydroelectric business segment operates in Ontario, generating and selling electricity from most of the Company's baseload hydroelectric generating stations. The business segment is comprised of electricity generated by the Sir Adam Beck 1, 2 and Pump generating station, DeCew Falls 1 and 2, and the R.H. Saunders hydroelectric facilities. Ancillary revenues and other revenues are earned through offering available generating capacity as operating reserve and through the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services. These ancillary revenues and other revenues are included by the OEB in the determination of the regulated prices for these facilities.

#### **Unregulated – Hydroelectric Segment**

The Unregulated – Hydroelectric business segment operates in Ontario, generating and selling electricity from the Company's hydroelectric generating stations, which are not subject to rate regulation. The segment includes hydroelectric stations that are subject to ESAs. Ancillary revenues and other revenues are earned through offering available generating capacity as operating reserve, and through the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services.

#### **Unregulated – Thermal Segment**

The Unregulated – Thermal business segment operates in Ontario, generating and selling electricity from the Company's thermal generating stations, which are not subject to rate regulation. Ancillary revenues are earned through offering available generating capacity as operating reserve, and the supply of other ancillary services including voltage control and reactive support, regulation service, and other services.

### Other

The Other category includes revenue that OPG earns from its 50 percent joint venture share of Brighton Beach related to an energy conversion agreement between Brighton Beach and Shell Energy North America (Canada) Inc. This category also includes revenue that OPG earns from its 50 percent joint venture share of the PEC gas-fired generating station, which is operated under the terms of an Accelerated Clean Energy Supply contract with the OPA. The revenue and expenses related to OPG's trading and other non-hedging activities are also reported in the Other category. As part of these activities, OPG transacts with counterparties in Ontario and neighbouring energy markets in predominantly short-term trading activities of typically one year or less in duration. These activities relate primarily to physical energy that is purchased and sold at the Ontario border, sales of financial risk management products and sales of energy-related products. All contracts that are not designated as hedges are recorded as assets or liabilities at fair value, with changes in fair value recorded in the Other category. In addition, the Other category includes revenue from real estate rentals.

OM&A expenses of the generation segments include an inter-segment service fee for the use of certain property, plant and equipment, and intangible assets held within the Other category. The total service fee is recorded as a reduction to the Other category's OM&A expenses.

The service fee included in OM&A expenses by segment for the years ended December 31 is as follows:

(millions of dollars)	2013	2012
Regulated – Nuclear Generation	23	23
Regulated – Hydroelectric	2	2
Unregulated – Hydroelectric	3	3
Unregulated – Thermal	5	6
Other	(33)	(34)

Segment Income (Loss) for the Year Ended		Regulated Nuclear			Unregulat	ed		
December 31, 2013 (millions of dollars)	Nuclear Generation	Waste Management	Hydro- electric	Hydro- electric	Thermal	Other	Elimination	Total
		J						
Revenue	2,894	113	843	472	578	72	(109)	4,863
Fuel expense	237	-	268	82	121	-	-	708
Gross margin	2,657	113	575	390	457	72	(109)	4,155
Operations, maintenance and administration	2,022	121	108	236	362	7	(109)	2,747
Depreciation and amortization	626	-	129	74	115	19	-	963
Accretion on fixed asset removal and nuclear waste management liabilities		742	-	-	14		-	756
Earnings on nuclear fixed asset removal and nuclear waste management funds	-	(628)	-	-	-	-	-	(628)
Property and capital taxes	29	-	(2)	-	16	10	-	53
Restructuring	-	-	-	-	50	-	-	50
Other (income) loss	(1)	-	-	4	(4)	(37)	-	(38)
Income (loss) before interest and income								
taxes	(19)	(122)	340	76	(96)	73	-	252

Segment Income (Loss) for the Year Ended		Regulated Nuclear			Unregulat	ed		
December 31, 2012	Nuclear	Waste	Hydro-	Hydro-				
(millions of dollars)	Generation	Management	electric	electric	Thermal	Other	Elimination	Total
Revenue	3,060	107	724	373	507	64	(103)	4,732
Fuel expense	261	-	261	71	162	-	-	755
Gross margin	2,799	107	463	302	345	64	(103)	3,977
Operations, maintenance and administration	1,930	114	103	236	361	7	(103)	2,648
Depreciation and amortization	480	-	33	73	59	19	-	664
Accretion on fixed asset removal and nuclear waste management liabilities	-	712	-	-	13	-	-	725
Earnings on nuclear fixed asset removal and nuclear waste management funds	-	(651)	-	-	-	-	-	(651)
Property and capital taxes	26	-	(1)	(1)	16	7	-	47
Restructuring	-	-	-	-	3	-	-	3
Other (income) loss	(1)	-	4	4	9	(26)	-	(10)
Income (loss) before interest and income								
taxes	364	(68)	324	(10)	(116)	57	-	551

Selected Consolidated		Regulated			Unregulate	d	
Balance Sheet Information							
as at December 31, 2013	Nuclear	Nuclear Waste	Hydro-	Hydro-			
(millions of dollars)	Generation	Management	electric	electric	Thermal	Other	Total
Segment property, plant and equipment in-service, net	4,864	-	5,099	3,312	153	170	13,598
Segment construction in progress	866	-	24	2,090	146	14	3,140
Segment property, plant and equipment, net	5,730	-	5,123	5,402	299	184	16,738
Segment intangible assets in-service, net	15	-	1	4	-	17	37
Segment development in progress	2	-	-	-	-	20	22
Segment intangible assets, net	17	-	1	4	-	37	59
Segment materials and supplies inventory, net:							
Short-term	94	-	-	-	1	-	95
Long-term	322	-	-	1	7	-	330
Segment fuel inventory	334	-	-	-	56	-	390
Nuclear fixed asset removal and nuclear waste management funds (current and non-current portions)	-	13,496	-	-		-	13,496
Fixed asset removal and nuclear waste management liabilities	-	(15,903)	-	-	(322)	(32)	(16,257)

Selected Consolidated		Regulated			Unregulate	d		
Balance Sheet Information as at December 31, 2012 (millions of dollars)	Nuclear Generation	Nuclear Waste Management	Hydro- electric	Hydro- electric	Thermal	Other	Total	
Segment property, plant and equipment in-service, net	4,921	-	3,695	3,310	256	176	12,358	
Segment construction in progress	554	-	1,396	1,475	69	8	3,502	
Segment property, plant and equipment, net	5,475	-	5,091	4,785	325	184	15,860	
Segment intangible assets in-service, net	21	-	-	5	-	16	42	
Segment development in progress	2	-	-	-	-	8	10	
Segment intangible assets, net	23	-	-	5	-	24	52	
Segment materials and supplies inventory, net:								
Short-term	83	-	-	-	7	-	90	
Long-term	327	-	-	1	27	-	355	
Segment fuel inventory	328	-	-	-	177	-	505	
Nuclear fixed asset removal and nuclear waste management funds (current and non-current portion)	-	12,717	-	-	-	-	12,717	
Fixed asset removal and nuclear waste management liabilities	-	(15,177)	-	-	(313)	(32)	(15,522)	

Selected Consolidated Cash		Regulated			Unregulate	d	
Flow Information (millions of dollars)	Nuclear Generation	Nuclear Waste Management	Hydro- electric	Hydro- electric	Thermal	Other	Total
Year ended December 31, 2013							
Investment in property, plant and equipment, and intangible assets	633	-	114	688	95	38	1,568
Year ended December 31, 2012 Investment in property, plant and equipment, and intangible assets	400		262	673	62	30	1.427

#### 2014 New Business Segments

Effective January 1, 2014, given the change in OPG's generation portfolio, OPG has revised its reportable business segments such that electricity generating facilities with similar revenue mechanisms and risk profiles will be reflected in separate segments.

OPG's reportable business segments, effective January 1, 2014 are: Regulated – Nuclear Generation, Regulated – Nuclear Waste Management, Regulated Hydroelectric, Contracted Generation Portfolio, and Services, Trading, and other Non-Generation. OPG's Regulated – Nuclear Generation and Regulated – Nuclear Waste Management segments are unchanged. The Regulated – Hydroelectric segment will continue to include the results of Sir Adam Beck 1, 2 and Pump GS, DeCew Falls 1 and 2, and the R.H. Saunders hydroelectric facilities and will also include the results of the 48 hydroelectric stations, which have been prescribed under amended *Ontario Regulation 53/05*, effective July 1, 2014. The Contracted Generation Portfolio segment will include the results of generating facilities that are under an ESA with the OPA or other long-term generation contracts. The Contracted Generation Portfolio segment will also include OPG's share of in-service generating capacity and equity income from its 50 percent ownership interest in PEC and Brighton Beach. The Services, Trading, and other Non-Generation segment will include revenue and expenses related to OPGs trading and other non-generation activities.

#### 17. NET CHANGES IN NON-CASH WORKING CAPITAL BALANCES

(millions of dollars)	2013	2012
Receivables from related parties	40	(16)
Other accounts receivable and prepaid expenses	(21)	(22)
Fuel inventory	115	150
Income taxes payable/recoverable	12	(5)
Materials and supplies	(5)	(8)
Accounts payable and accrued charges	98	73
	239	172

#### 18. RELATED PARTY TRANSACTIONS

Given that the Province owns all of the shares of OPG, related parties include the Province, Infrastructure Ontario, OPA and the other successor entities of Ontario Hydro, including Hydro One Inc. (Hydro One), the IESO, and the OEFC, and jointly controlled entities. The transactions between OPG and related parties are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties.

These transactions for the years ended December 31 are summarized below:

	Revenue	Expenses	Revenue	Expenses
(millions of dollars)	20	13	20	12
Hydro One				
Electricity sales	15	-	10	-
Services	-	14	-	14
Province of Ontario				
Gross revenue charge, water rentals and land tax	-	124	-	118
Guarantee fee	-	8	-	8
Used Fuel Fund rate of return guarantee	-	755	-	282
Decommissioning Fund excess funding	-	560	-	64
Pension benefits guarantee fee	-	1	-	2
OEFC				
Gross revenue charge and proxy property tax	-	208	-	201
Interest expense on long-term notes	-	187	-	189
Capital tax	-	1	-	(3)
Income taxes, net of investment tax credits	-	28	-	77
Contingency support agreement	360	-	283	-
nfrastructure Ontario				
Reimbursement of expenses incurred during the procurement process for new nuclear units			-	(1)
IESO				
Electricity sales	3,754	62	3,823	34
Ancillary services	125	-	56	-
OPA	136	_	92	_
	4,390	1,948	4,264	985

The balances, as at December 31, between OPG and its related parties are summarized below:

(millions of dollars)	2013	2012
Receivables from related parties		
Hydro One	2	3
IESO	317	337
OEFC	67	84
OPA	14	16
PEC	2	2
Accounts payable and accrued charges		
Hydro One	3	2
OEFC	51	51
Province of Ontario	2	3

#### 19. OTHER INCOME

(millions of dollars)	2013	2012
Income from investments subject to significant influence Thermal asset retirement obligation estimate change <i>(Note 3)</i> Thunder Bay Generating Station conversion cost (recovery) write off Other loss	(35) (1) (3) 1	(26) - 9 7
Other income	(38)	(10)

#### 20. INVESTMENTS SUBJECT TO SIGNIFICANT INFLUENCE

Investments subject to significant influence consist of OPG's 50 percent ownership interest in the jointly controlled entities of PEC and Brighton Beach, which are accounted for using the equity method as described in Note 3. Details of the balance included in the consolidated balance sheets as at December 31 are as follows:

(millions of dollars)	2013	2012
PEC		
Current assets	19	8
Long-term assets	303	315
Current liabilities	(15)	(8)
Long-term liabilities	(4)	(3)
Brighton Beach		
Current assets	5	11
Long-term assets	196	209
Current liabilities	(11)	(11)
Long-term liabilities	(5)	(9)
Long-term debt	(129)	(139)
Investments subject to significant influence	359	373

#### 21. RESEARCH AND DEVELOPMENT

For the year ended December 31, 2013, research and development expenses of \$117 million (2012 – \$113 million) were charged to operations.

#### 22. RESTRUCTURING

In 2011, OPG announced its decision to close two additional coal-fired units at the Nanticoke GS, consistent with the 2010 Ontario Long-Term Energy Plan and the 2011 Supply Mix Directive. Total restructuring costs, primarily severance costs, related to these closures are \$21 million and have been recognized in the consolidated financial statements.

OPG has ceased using coal at the Atikokan GS, which has an impact on staff requirements. Severance costs of \$2 million were recorded during March 2013.

In March 2013, Unit 2 at the Thunder Bay GS was removed from the IESO market as it is not required by the IESO. The impact on staff requirements has been finalized. The total restructuring costs, exclusively severance costs, associated with this unit are estimated to be \$4 million and were recorded in July 2013.

In March 2013, the Minister of Energy issued a declaration mandating that OPG cease the use of coal at the Nanticoke GS and Lambton GS by the end of 2013. OPG has estimated the restructuring costs, including severance and relocation to other OPG sites, at \$52 million and has accrued \$44 million of severance costs during the third and fourth quarters of 2013. Relocation costs will be recorded as incurred, primarily in 2014.

The change in the restructuring liability for severance costs during 2013 and 2012 is as follows:

(millions of dollars)	
Liability, January 1, 2012 Payments during the year	23 (20)
Liability, December 31, 2012	3
Restructuring charges during the year	50
Payments during the year	(13)
Liability, December 31, 2013	40

OPG conducted discussions with key stakeholders, including The Society and PWU, in accordance with their respective collective bargaining agreements, at all plants impacted to date by the regulation requiring the cessation of the use of coal for electricity generation. Given collective agreement provisions allowing deferral of severance payout to future periods, the existing restructuring liability is expected to be drawn down by the end of 2016.

Filed: 2016-05-27 EB-2016-0152 Exhibit A2-1-1 Attachment 1 Page 149 of 152

# **OPG OFFICERS**\*



JAKE EPP Chairman of the Board of Directors



TOM MITCHELL President and Chief Executive Officer



BRUCE BOLAND Senior Vice President, Commercial Operations and Environment



CARLO CROZZOLI Senior Vice President, Corporate Business Development and Chief Risk Officer



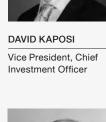
CHRIS GINTHER Senior Vice President, Law, General Counsel and Chief Ethics Officer



ROBIN HEARD Interim Senior Vice President, Chief Financial Officer



GLEN JAGER Chief Nuclear Officer





BARB KEENAN Senior Vice President, People and Culture

\*As of March 6, 2014



CATRIONA KING Vice President, Corporate Secretary and Executive Operations



SCOTT MARTIN Senior Vice President, Business and Administrative Services



JOHN LEE Vice President, Treasurer



BILL ROBINSON Senior Vice President, Nuclear Projects



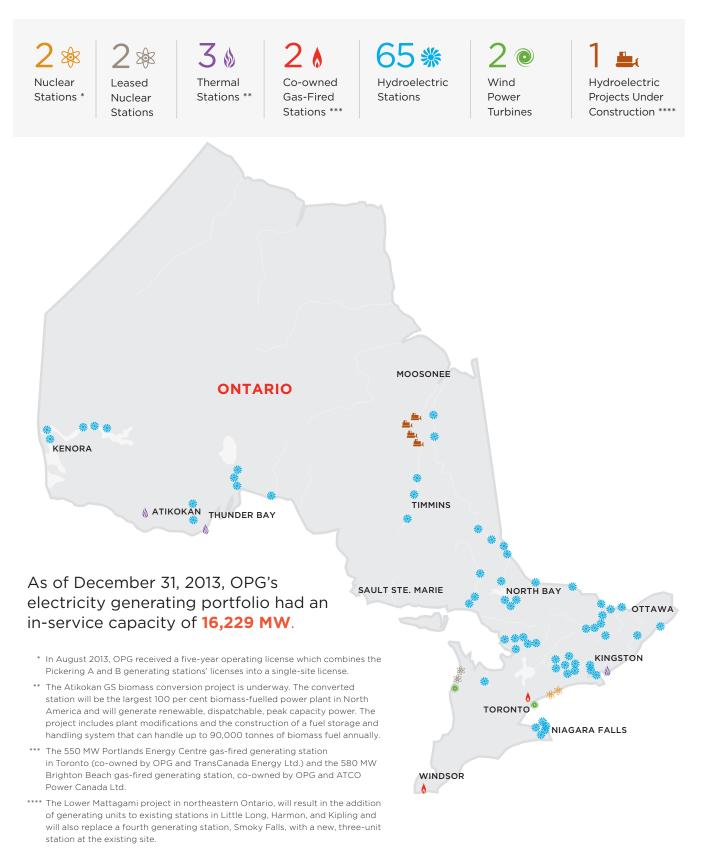
MIKE MARTELLI Senior Vice President, Hydro – Thermal Operations

| 147

Filed: 2016-05-27 EB-2016-0152 Exhibit A2-1-1 Attachment 1 Page 150 of 152

Filed: 2016-05-27 EB-2016-0152 Exhibit A2-1-1 Attachment 1 Page 151 of 152

# **OPG GENERATION FACILITIES**



Filed: 2016-05-27 EB-2016-0152 Exhibit A2-1-1



This annual report is also available in French on our website Ce rapport est également publié en français sur notre site Web www.opg.com

Ontario Power Generation Inc. Head Office is located at 700 University Avenue, Toronto, Ontario M5G 1X6; Telephone (416) 592-2555 or (877) 592-2555.

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Filed: 2016-05-27, EB-2016-0152 Exhibit A2-1-1, Attachment 2 Page 1 of 174



# 2014 ANNUAL REPORT







# **2014 OVERVIEW**

## **Financial Highlights**

(millions of dollars except where noted)	2014	2013
REVENUE		
Revenue	4,963	4,863
Fuel expense	641	708
Gross margin	4,322	4,155
EXPENSES		
Operations, maintenance and administration	2,615	2,747
Depreciation and amortization	754	963
Accretion on fixed asset removal and nuclear waste management liabilities	797	756
Earnings on nuclear fixed asset removal and nuclear waste funds	(714)	(628)
Property Taxes	32	53
Restructuring	18	50
Other	36	(35)
	3,538	3,906
Income before other income, interest, income taxes, and extraordinary item	784	249
Other income	(3)	(3)
Net interest expense	80	86
Income tax expense	139	31
Income before extraordinary item	568	135
Extraordinary item	243	-
Net Income	811	135
ELECTRICITY PRODUCTION (TWh)	82.2	80.8
<b>CASH FLOW</b> Cash flow provided by operating activities	1,433	1,174



#### **Electricity Terms**

- One megawatt (MW) is one million watts. Megawatts are a measure of electricity supply capacity at a point in time.
- One kilowatt (kW) is 1,000 watts; one gigawatt (GW) is one billion watts; and one terawatt (TW) is one trillion watts.
- One kilowatt hour (kWh) is a measure of electricity demand or supply per hour. One kilowatt hour is the energy expended by fifty 20-watt compact fluorescent lights burning for one hour. The typical residential customer uses approximately 800 kWh per month.
- One megawatt hour (MWh) is 1,000 kWh; one gigawatt hour (GWh) is one million kWh; and one terawatt hour (TWh) is one billion kWh.

# **Revenue & Operating Highlights**

Legend

- Contracted Generation Portfolio\*
- Regulated Hydroelectric
- Regulated Nuclear Waste Management
- **Regulated Nuclear** Generation
- Other

\* Includes OPG's thermal and hydroelectric generating stations that are under contracts, wind turbines, and OPG's share of the Portlands Energy Centre and Brighton Beach Generating Station.

**Electricity Generation** (TWh) 82.2 80.8 2.8 4.7 1,417 31.3 31.4 3.015 481 447

2013

2014

Revenue

4,963

329

121

**Q**1

2014

(millions of dollars)

In-Service Generating Capacity (MW) Dec. 31, 2014



Filed: 2016-05-27, EB-2016-0152 Exhibit A2-1-1, Attachment 2 Page 3 of 174

Corporate Profile	1
Joint Message: Board Chair & President	2
Achievement Highlights	6
Management's Discussion and Analysis	9
Consolidated Financial Statements	106
Notes to the Consolidated Financial Statements	115
Officers	170
Ontario Power Generation Facilities	171



Lower Mattagami, Kipling GS construction

## OPG IS ONTARIO'S LARGEST CLEAN ELECTRICITY GENERATOR.

At Dec. 31, 2014, Ontario Power Generation's generating portfolio had an in-service capacity of 17,059 megawatts (MW). OPG operates:



Nuclear generating stations



Hydroelectric generating stations



Thermal generating stations



Wind Power turbines OPG's focus is on the efficient and reliable generation and sale of electricity from its generating assets, while operating in a safe, open and environmentally-responsible manner. OPG was established under the *Business Corporations Act* (Ontario) and is wholly owned by the Province of Ontario.

The company's diversified generating portfolio consists of two nuclear generating stations, 65 hydroelectric generating stations, and three operating thermal generating stations, one of which is the largest capacity 100 per cent biomass-fuelled plant in North America.

OPG also owns two other nuclear generating stations, which are leased on a long-term basis to Bruce Power L.P. In addition, the company co-owns both the Brighton Beach gas-fired generating station with ATCO Power Canada Ltd., and the gas-fired Portlands Energy Centre with TransCanada Energy Ltd.

Filed: 2016-05-27, EB-2016-0152 Exhibit A2-1-1, Attachment 2 Page 4 of 174

# A MESSAGE FROM THE BOARD CHAIR AND PRESIDENT

Ontario Power Generation (OPG) produces more than half of the electricity Ontarians rely on each day. Our operations touch all corners of the province and many places in between. We power the province – 24 hours a day, seven days a week – and we do so with a clean, efficient and reliable generating fleet, all at a significantly lower price than the average of all other generators.



Bernard Lord Board Chair



Tom Mitchell President and CEO

In 2014, OPG successfully completed its phase-out of coal-fired generation. This is considered to be North America's single largest climate change initiative. With the closure of these units, the electricity we produce is now 99.7 per cent free of greenhouse gas and smog-causing emissions.

## **Operating Highlights**

Operationally, 2014 was a strong year for OPG. Net income was \$811 million, an increase of \$676 million, compared to 2013. We continued to gain traction with our business transformation, realizing additional savings through business efficiencies, streamlined operations and a further reduction in staff numbers. These efforts have saved over \$500 million since 2011.

OPG's total generation also saw an increase over the previous year as a result of our continued strong generation asset reliability.

### Project Management Advancements

By the close of 2014, we successfully completed the \$2.6 billion Lower Mattagami hydroelectric project, more than six months ahead of schedule.

This unique commercial partnership with the Moose Cree First Nation has added 438 megawatts (MW) of clean, renewable electricity to the province. It also created jobs and local economic benefits through employment and the involvement of local businesses. At the peak of construction about 1,600 people were employed, including about 250 First Nation and Métis people.

OPG was honoured to receive the Ontario Waterpower Association's Stewardship Award for its work on the Lower Mattagami project, including efforts relating to sustainable development, environmental preservation, and community capacity development.

We're extremely proud of this one-ofa-kind success story. The Lower Mattagami redevelopment illustrates the power of partnership, a shared vision, and solid project management.



Filed: 2016-05-27, EB-2016-0152 Exhibit A2-1-1, Attachment 2 Page 5 of 174

We also successfully converted the Atikokan Generating Station (GS) to biomass fuel. This conversion project is the first of its kind in Ontario and has placed OPG at the forefront of this innovative technology.

With over 200 MW of generating capacity, Atikokan GS is the largest 100 per cent biomass-fuelled power plant in North America, generating renewable, dispatchable, peak-capacity power. The expertise and project management insights we have acquired through this initiative will be used on other development projects and shared globally.

These development projects have not only provided more clean power to the province, they also have created new economic opportunities and sustainable jobs for Northern Ontario in the green energy and forestry industries.

# Improving Efficiency and Reducing Costs

Three years ago, OPG launched a company-wide business transformation to drive efficiencies and reduce operating costs. The aim is to increase business efficiencies to ensure the company continues to moderate electricity pricing for the people of Ontario while remaining a safe, reliable, generator.





To date, we've implemented a new organization model with fewer staff, streamlined our service delivery and improved our internal processes. Since 2011, efforts have enabled us to reduce our headcount by approximately 2,200 or 20 per cent – largely through attrition – for a savings of over \$500 million. By the end of 2016, we expect to have saved over \$1 billion.

By achieving these reductions in a careful, measured way, we've ensured our focus on safety and performance remains strong.

#### Focus on Refurbishment

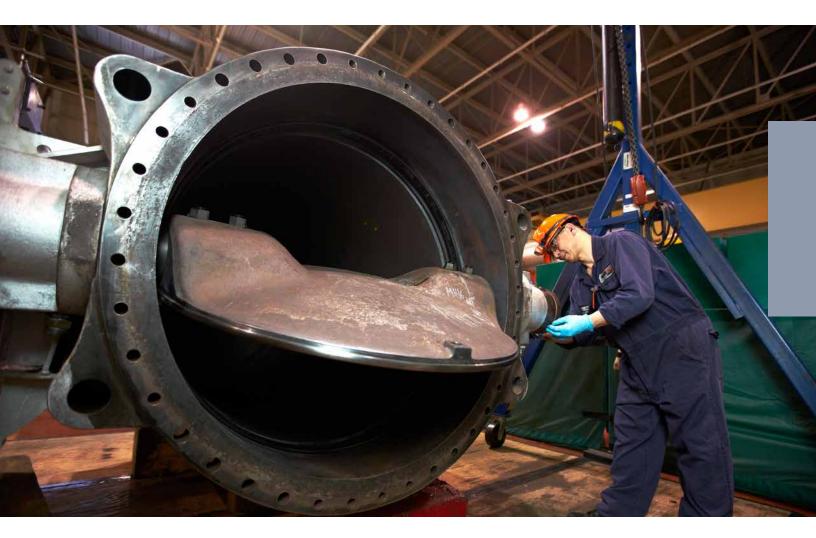
Looking ahead, the Darlington refurbishment is OPG's most significant undertaking. In 2014, we continued to make progress on preparations for the refurbishment with the opening of the Darlington Energy Complex. Energy Minister Bob Chiarelli joined OPG staff to officially open this state-of-the-art training facility in Durham Region. This project was completed ahead of schedule and is part of our extensive planning and preparation to ensure everyone working on the refurbishment will be trained and ready to complete their tasks safely, precisely and efficiently.

Darlington's refurbishment is a milestone project for OPG. It reinforces our role in the province by providing an additional 30 years of clean, affordable electricity, while at the same time producing over 100,000 person years of employment on the project. These positive economic benefits will be shared across the province.

# Nuclear Operational Excellence

During 2014, OPG's nuclear facilities demonstrated strong performance and continuous improvement against industry benchmarks. In April, Darlington Nuclear received its second consecutive excellent safety and performance peer evaluation.

The station also received the highest possible safety and control rating - its fifth consecutive excellent performance evaluation – from the Canadian Nuclear Safety Commission (CNSC).



Pickering Nuclear also received positive safety and control ratings from CNSC staff, with improved performance recognized in the areas of radiation protection and security.

These achievements demonstrate OPG's strong focus on safety and operational excellence. We continue to make investments and improve the performance of the Pickering Nuclear facility, which will provide a reliable electricity supply for Ontario while Darlington undergoes its refurbishment.

#### Safety Excellence

OPG's employee safety performance for 2014 continued to show strong results - achieving the best workplace safety record in our company's history. And, for the third straight year, the Canadian Electricity Association recognized OPG's strong commitment to safety with a President's Award of Excellence for Employee Safety.

### Sustaining Success

The solid results we were able to achieve in 2014 are a direct result of the tireless efforts of the women and men who work for OPG. Our employees are dedicated, highly skilled, and committed to providing the province the power it needs, when it's needed.

We thank our employees for their continued contributions.

Looking to the future, OPG will continue to focus on providing maximum value to our shareholder and to the people of Ontario.

This means ensuring our energy production is reliable, safe and environmentally sustainable for Ontarians today and in the future.

Beenno loro Mitcheee

BERNARD LORD **Board Chair** 

TOM MITCHELL President and CEO

# ACHIEVEMENT HIGHLIGHTS OF 2014



### Coal Closure

In April 2014, OPG burned the last piece of coal at its Thunder Bay GS which, as of January 2015, provides dispatchable electricity from advanced biomass fuel. The phase-out of coal in Ontario is considered to be the single largest climate change initiative in North America and is a key milestone in the Ontario government's strategy to move to cleaner electricity. Former coalburning units at Lambton and Nanticoke are currently being preserved for possible conversion to alternate fuels, if required. OPG's generation is now 99.7 per cent free of greenhouse gas and smog-producing emissions.

#### Atikokan's Conversion to Biomass

In July 2014, Atikokan GS completed its transition from coal to biomass. The converted station provides renewable electricity generation from a sustainable fuel recognized as beneficial to climate change mitigation. Atikokan is the first of its kind in Ontario and is North America's largest 100 per cent biomassfuelled power plant. The two-year conversion project is another example of OPG's commitment to clean energy.

#### Lower Mattagami River Project Completion

The Lower Mattagami hydroelectric project was completed in 2014, six months ahead of schedule and on budget. OPG and the Moose Cree First Nation began working together on the \$2.6 billion, 438 MW project in 2010. Generating units were added to existing stations at Little Long, Harmon and Kipling, and a new three-unit Smoky Falls/Kâpâškilehtehk generating station replaced the 83-year-old station. Over the course of the project about \$1 billion in contracts was awarded to Ontario businesses, including over \$350 million in Northern Ontario.



## Business Transformation Savings

Significant savings were achieved through OPG's business transformation in 2014. Since the project began in 2011, the number of OPG employees has decreased by approximately 2,200 with cumulative savings of over \$500 million. The aim is to save approximately \$1 billion by the end of 2016. OPG has created a new centre-led organizational structure and introduced over 100 change initiatives to improve processes and drive efficiencies. Business Transformation wrapped up at the end of 2014, but process and efficiency improvement is a continuous goal for OPG.

## CEA President's Award for Safety Excellence

In November 2014, the Canadian Electricity Association (CEA) presented OPG with a President's Award for Safety Excellence. The CEA presents awards to member organizations ranked at the top of the electricity industry for employee safety. This was the third consecutive year OPG received a CEA award for safety performance. In addition, two employee emergency responders from Pickering Nuclear received the CEA Lifesaving Award.

# Pickering Nuclear Continued Operations

The Canadian Nuclear Safety Commission (CNSC) approved OPG's request for continued operations at its Pickering nuclear station and authorized the company to operate the station to 2020. OPG completed extensive studies to meet the necessary requirements and demonstrate that Pickering Nuclear can safely operate until that period. Pickering is now well-positioned to support the Darlington refurbishment when the Darlington units will be offline.



### Darlington Energy Complex Opening

The Darlington Energy Complex opened ahead of schedule in 2014. Featuring a life-sized training model of a nuclear reactor face, the complex is part of OPG's intensive planning and preparation to ensure everyone working on refurbishing Darlington's reactors is equipped to complete their tasks safely, precisely and efficiently. Energy Minister Bob Chiarelli officially opened the complex with OPG Board Chair Bernard Lord and President Tom Mitchell. Following the opening, over 3,500 visitors attended community open house events at the complex.

#### OPG and Gull Bay First Nation Celebrate New Relationship

OPG and Kiashke Zaaging Anishinaabek (KZA), also known as Gull Bay First Nation, celebrated a new relationship with the signing of a Final Settlement Agreement and a formal apology by OPG. The settlement and apology were for past grievances related to dams constructed by OPG's predecessor companies on the Nipigon River between 1918 and 1950. OPG has successfully negotiated past grievance settlements with many of Ontario's First Nations.

#### Social Responsibility Recognition

The CEA awarded OPG the 2014 Sustainable Electricity - Social Responsibility Award for its achievements in First Nations/Métis relations and corporate sustainability. The award recognizes OPG for its strong commitment to building and growing mutually beneficial working relationships with First Nations and Métis communities in Ontario. OPG is currently working with more than 50 First Nations and Métis communities from across the province on numerous projects and partnerships.



# Outstanding Reviews for Darlington

Darlington Nuclear earned top marks for its performance in 2014 from the CNSC. In the CNSC's annual safety assessment, Darlington achieved the highest standard of "Fully Satisfactory" - the only station to achieve that rating. This is the fifth year in a row of sustained top performance by Darlington. The rating by the regulator was followed by an excellent peer evaluation and maintains the station's standing as among the top performing nuclear plants in the world.

### Hydroelectric Improvement Projects

OPG invested in several major hydro improvement projects in 2014 to ensure strong ongoing performance:

Sir Adam Beck Pump Storage facility near Niagara Falls - turbine upgrades and rehabilitation;

Chats Falls GS, near Ottawa - dam rehabilitation;

**Pine Portage GS**, near Nipigon – turbine runner replacement and generator upgrade;

**Des Joachims GS**, near Pembroke – overhaul and upgrade of Unit 5, part of an extensive asset improvement program to upgrade the entire station;

**McVittie GS**, near Sudbury - two new sluice gates.

## Exercise Unified Response

In May, OPG participated in *Exercise* Unified Response at the Darlington nuclear station. The mock emergency response involved more than 1,000 people and 54 agencies who demonstrated how they would protect and inform the public in the unlikely event an accident similar in scale to Japan's Fukushima disaster. Wellversed in emergency planning exercises, OPG demonstrated our capabilities to a spectrum of stakeholders and received congratulations from an independent evaluator impressed with the comprehensive drill.

Filed: 2016-05-27, EB-2016-0152 Exhibit A2-1-1, Attachment 2 Page 10 of 174

# FINANCIAL REPORTING TABLE OF CONTENTS

# Management's Discussion & Analysis

Forward-Looking Statements	ç
The Company	10
Revenue Mechanisms for Regulated and	
Unregulated Generation	12
Highlights	14
Core Business and Strategy	2
Capability to Deliver Results	33
Business Segments	34
Key Generation and Financial Performance Indicators	36
Discussion of Operating Results by Business Segment	38
Regulated - Nuclear Generation Segment	38
Regulated - Nuclear Waste Management Segment	39
Regulated - Hydroelectric Segment	40
Contracted Generation Portfolio Segment	4
Services, Trading and Other Non-Generation Segment	42
Net Interest Expense	42
Income Taxes	42
Liquidity and Capital Resources	43
Balance Sheet Highlights	46
Critical Accounting Policies and Estimates	47
Changes in Accounting Policies and Estimates	55
Risk Management	57
Related Party Transactions	7
Internal Controls over Financial Reporting and	
Disclosure Controls	72
Fourth Quarter	73
Quarterly Financial Highlights	75
Supplementary Non-GAAP Financial Measures	78
Corporate Governance	80
Audit and Finance Committee Information	98

# **Consolidated Financial Statements**

Statement of Management's Responsibility for	
Financial Information	106
Independent Auditors' Report	108
Consolidated Financial Statements	109
Notes to the Consolidated Financial Statements	115

# ONTARIO POWER GENERATION INC. MANAGEMENT'S DISCUSSION AND ANALYSIS

This Management's Discussion and Analysis (MD&A) should be read in conjunction with the audited consolidated financial statements and accompanying notes of Ontario Power Generation Inc. (OPG or Company) as at and for the year ended December 31, 2014. OPG's consolidated financial statements are prepared in accordance with United States generally accepted accounting principles (US GAAP) and are presented in Canadian dollars.

As required by *Ontario Regulation 395/11*, as amended, a regulation under the *Financial Administration Act* (Ontario) (FAA), OPG adopted US GAAP for the presentation of its consolidated financial statements, effective January 1, 2012. In the first quarter of 2014, the Ontario Securities Commission (OSC) approved an exemption which allows OPG to apply US GAAP up to January 1, 2019. The term of the exemption is subject to certain conditions, which may result in the expiry of the exemption prior to January 1, 2019. For details, refer to the heading, *Exemptive Relief for Reporting under US GAAP*, in the section *Changes in Accounting Policies and Estimates*. This MD&A is dated March 13, 2015.

#### FORWARD-LOOKING STATEMENTS

The MD&A contains forward-looking statements that reflect OPG's current views regarding certain future events and circumstances. Any statement contained in this document that is not current or historical is a forward-looking statement. OPG generally uses words such as "anticipate", "believe", "foresee", "forecast", "estimate", "expect", "schedule", "intend", "plan", "project", "seek", "target", "goal", "strategy", "may", "will", "should", "could" and other similar words and expressions to indicate forward-looking statements. The absence of any such word or expression does not indicate that a statement is not forward-looking.

All forward-looking statements involve inherent assumptions, risks and uncertainties, including those set out under the section *Risk Management*. All forward-looking statements could be inaccurate to a material degree. In particular, forward-looking statements may contain assumptions such as those relating to OPG's fuel costs and availability, generating station performance, cost of fixed asset removal and nuclear waste management, performance of investment funds, conversion of coal-fired generating stations, refurbishment of existing facilities, development and construction of new facilities, pension and other post-employment benefit (OPEB) obligations, income taxes, electricity spot market prices, proposed new legislation, the ongoing evolution of the Ontario electricity industry, environmental and other regulatory requirements, health, safety and environmental developments, business continuity events, the weather, and the impact of regulatory decisions by the Ontario Energy Board (OEB). Accordingly, undue reliance should not be placed on any forward-looking statement. The forward-looking statements included in this MD&A are made only as of the date of this MD&A. Except as required by applicable securities laws, OPG does not undertake to publicly update these forward-looking statements to reflect new information, future events or otherwise.

### THE COMPANY

OPG is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario. OPG was established under the *Business Corporations Act* (OBCA) and is wholly owned by the Province of Ontario (Province or Shareholder).

As at December 31, 2014, OPG's electricity generation portfolio had an in-service capacity of 17,059 megawatts (MW). OPG operates two nuclear generating stations, three thermal generating stations, 65 hydroelectric generating stations, and two wind power turbines. In addition, OPG and TransCanada Energy Ltd. co-own the 550 MW Portlands Energy Centre (PEC) gas-fired combined cycle generating station (GS). OPG and ATCO Power Canada Ltd. co-own the 560 MW Brighton Beach (Brighton Beach) gas-fired combined cycle GS. OPG's 50 percent share of the in-service capacity and generation volume of these co-owned facilities is included in the generation portfolio statistics set out in this report. The income of the co-owned facilities is accounted for using the equity method of accounting, and OPG's share of income is presented in Income from investments subject to significant influence under the Contracted Generation Portfolio segment.

OPG also owns two other nuclear generating stations, which are leased on a long-term basis to Bruce Power L.P. (Bruce Power). Income from these leased stations is included in revenue under the Regulated – Nuclear Generation segment. The leased stations are not included in the generation portfolio statistics set out in this report.

#### **OPG's Reporting Structure**

Effective January 1, 2014, OPG revised the composition of its reportable business segments to reflect changes in its generation portfolio and its internal reporting. These changes primarily reflect 48 of OPG's hydroelectric generating facilities which were prescribed for rate regulation beginning in 2014, and ending the use of coal at the Nanticoke and Lambton generating stations in 2013. OPG's reportable business segments, effective January 1, 2014, are as follows:

- Regulated Nuclear Generation
- Regulated Nuclear Waste Management
- Regulated Hydroelectric
- Contracted Generation Portfolio
- Services, Trading, and Other Non-Generation.

OPG receives regulated prices for electricity generated from most of its hydroelectric facilities and all of the nuclear facilities that it operates. This includes the following facilities (collectively, prescribed or regulated facilities):

- Sir Adam Beck 1, 2 and Pump hydroelectric generating stations
- DeCew Falls 1 and 2 hydroelectric generating stations
- R.H. Saunders hydroelectric GS
- 48 hydroelectric stations which were prescribed for rate regulation beginning in 2014, under the amended *Ontario Regulation 53/05*
- Pickering Nuclear GS (Pickering GS)
- Darlington Nuclear GS (Darlington GS).

The operating results related to these regulated facilities are described under the Regulated – Nuclear Generation, Regulated – Nuclear Waste Management, and Regulated – Hydroelectric segments. For the remainder of OPG's operating generating facilities, the operating results are described under the Contracted Generation Portfolio segment. A description of all OPG's segments is provided under the section, *Business Segments*.

### In-Service Generating Capacity

OPG's in-service generating capacity by business segment as of December 31 was as follows:

(MW)	2014	<b>2013</b> (adjusted)
Regulated – Nuclear Generation	6,606	6,606
Regulated – Hydroelectric <sup>1</sup>	6,426	6,432
Contracted Generation Portfolio <sup>2</sup>	4,027	3,748
Total	17,059	16,786

<sup>1</sup> Includes the capacity of 48 of OPG's hydroelectric generating facilities which were prescribed for rate regulation beginning in 2014, per the amended *Ontario Regulation 53/05*. The generating capacity of the comparative period has been adjusted to include the capacity of these facilities.

<sup>2</sup> Includes OPG's share of in-service generating capacity of 275 MW for PEC and 280 MW for Brighton Beach. The generating capacity of the comparative period has been adjusted to include OPG's share of the capacity of PEC and Brighton Beach.

The in-service capacity of the Regulated – Nuclear Generation and Regulated – Hydroelectric segments as of December 31, 2014 was largely consistent with the capacity as of December 31, 2013.

During 2014, the in-service capacity of the Contracted Generation Portfolio segment increased by 279 MW. As a result of placing in-service all six new generating units constructed as part of the Lower Mattagami River project, the segment capacity increased by 438 MW, net of the existing 52 MW Smoky Falls station which was removed from service in July 2014 in preparation for its planned decommissioning. This increase was partially offset by the removal from service of one coal-fired unit at the Thunder Bay GS. The closure of OPG's coal-fired generating units was mandated by the Province. The capacity of the second unit at the Thunder Bay GS, which was being converted to use advanced biomass fuel as at December 31, 2014, is included in the total capacity of the Contracted Generation Portfolio segment. The converted unit was placed in-service in January 2015.

### REVENUE MECHANISMS FOR REGULATED AND UNREGULATED GENERATION

#### **Regulated Generation**

The OEB sets the prices for electricity generated from OPG's regulated nuclear and hydroelectric facilities. The following are the OEB authorized regulated prices for electricity generated from these facilities for the years ended December 31:

	2014		2013
(\$/MWh)	Effective November 1	Prior to November 1	
Regulated – Nuclear Generation			
Base regulated price	59.29	51.52	51.52
Rate rider	4.18	4.18	6.27
	63.47	55.70	57.79
Regulated – Hydroelectric			
Existing regulated hydroelectric generating stations			
Base regulated price	40.20	35.78	35.78
Rate rider	2.02	2.02	3.04
	42.22	37.80	38.82
Hydroelectric generating stations prescribed for rate regulation beginning in 2014			
Base regulated price	41.93	N/A	N/A

The base regulated prices effective November 1, 2014 were established by the OEB's order issued in December 2014 on OPG's application for new regulated prices. Effective November 1, 2014, the OEB also established regulated prices for the 48 hydroelectric facilities that were prescribed for rate regulation beginning in 2014. Prior to November 1, 2014, the revenue for these 48 hydroelectric facilities was based on the Ontario electricity spot market price. The base regulated prices approved by the OEB are expected to remain in effect until superseded by a subsequent order of the OEB.

Rate riders are established by the OEB to recover or repay approved balances in OEB-authorized regulatory variance and deferral accounts. The rate riders in effect during 2014 and 2013 reflected the terms of a settlement agreement between OPG and intervenors, which provided for the recovery or repayment of most OEB-authorized regulatory variance and deferral account balances as at December 31, 2012. The settlement agreement was approved by the OEB in March 2013.

The OEB's order issued in December 2014 authorized the recovery of certain variance and deferral account balances as at December 31, 2013 over the period from January 1, 2015 to December 31, 2015. The approved 2015 riders are \$1.33 per megawatt hour (MWh) for nuclear generation and \$6.04/MWh for the existing regulated hydroelectric generation.

In December 2014, OPG filed an application with the OEB requesting additional nuclear and regulated hydroelectric rate riders, effective July 1, 2015, for disposition of the December 31, 2014 balances, not already being recovered or repaid, in most of the OEB-authorized variance and deferral accounts as at December 31, 2014.

Further details regarding the OEB's December 2014 order and OPG's application to recover amounts in approved variance and deferral accounts are discussed under the heading, *Recent Developments*.

### **Unregulated Generation**

Electricity generated from OPG's unregulated assets receives the Ontario electricity spot market price, except where an Energy Supply Agreement (ESA) with the Independent Electricity System Operator (IESO) or a cost recovery agreement is in place.

Effective January 1, 2015, the Ontario Power Authority (OPA) merged with the IESO. The new entity continued under the name Independent Electricity System Operator (IESO). As such, the IESO is substituted as the counterparty of ESAs or other agreements that were previously executed with the OPA.

The thermal generating facilities that had an agreement in effect during 2014 are:

- Lennox GS: Capacity provided by, and production from, this station are subject to an agreement with the IESO for the period from January 1, 2013 to September 30, 2022.
- Atikokan GS: Capacity provided by, and production from, this station are subject to an ESA with the IESO.
- Lambton GS and Nanticoke GS: During 2014, these coal-fired stations were subject to a Contingency Support Agreement with the Ontario Electricity Financial Corporation (OEFC). The agreement provided for the recovery of the costs of these stations after the Shareholder's resolution and regulations pertaining to carbon dioxide (CO<sub>2</sub>) emission reductions. On November 1, 2013, the OEFC provided written notice that it would terminate the Contingency Support Agreement, effective December 31, 2013, and triggered an amendment that allowed OPG to recover certain costs related to these stations for the 2014 year. Neither the Contingency Support Agreement provide for recovery of costs for periods after 2014. For further details refer to the disclosure under the heading, *Thermal Generating Assets*, under the section *Core Business and Strategy*.

In addition, during 2014 hydroelectric ESAs with the IESO were in effect for the following facilities:

- Lac Seul GS and Ear Falls GS
- Healey Falls GS
- Sandy Falls GS, Wawaitin GS, Lower Sturgeon GS, and Hound Chute GS
- Little Long GS, Harmon GS, Smoky Falls GS, and Kipling GS (collectively the Lower Mattagami River project generating stations). Payments under this ESA for the generation from the new units of these stations commenced in January 2014, when the first new unit was declared in-service. Payments under this ESA for the generation from the existing units of these stations commenced in December 2014 when the last new unit was declared in-service.

#### HIGHLIGHTS

#### **Overview of Results**

This section provides an overview of OPG's operating results for 2014 and 2013.

(millions of dollars – except where noted)	2014	2013
Revenue	4,963	4,863
Fuel expense	641	708
Gross margin	4,322	4,155
Operations, maintenance and administration	2,615	2,747
Depreciation and amortization	754	963
Accretion on fixed asset removal and nuclear waste management liabilities	797	756
Earnings on nuclear fixed asset removal and nuclear waste management funds	(714)	(628)
Regulatory disallowance related to the Niagara Tunnel project	77	-
Income from investments subject to significant influence	(41)	(35)
Property taxes	32	53
Restructuring	18	50
	3,538	3,906
Income before other income, interest, income taxes, and extraordinary item	784	249
Other income	(3)	(3)
Income before interact income taxes, and extractions without	787	252
Income before interest, income taxes, and extraordinary item	80	252 86
Net interest expense	00	00
Income before income taxes and extraordinary item	707	166
Income tax expense	139	31
	155	51
Income before extraordinary item	568	135
Extraordinary item	243	-
Net income	811	135
Net income attributable to the Shareholder	804	135
Net income attributable to non-controlling interest <sup>1</sup>	7	-
	1	-
Electricity production (TWh) <sup>2</sup>	82.2	80.8
	02.2	00.0
Cash flow		
Cash flow provided by operating activities	1,433	1,174

<sup>1</sup> Relates to the 25 percent interest of the Amisk-oo-Skow Finance Corporation, a corporation wholly owned by the Moose Cree First Nation, in the Lower Mattagami Limited Partnership (LMLP).

<sup>2</sup> Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach. Electricity production for the comparative period has been adjusted to include 50 percent of the production from PEC and Brighton Beach.

Net income attributable to the Shareholder was \$804 million for 2014, an increase of \$669 million, compared to 2013. Income before interest, income taxes, and extraordinary item for 2014 increased by \$535 million. The following are the significant factors which caused the variance:

Significant factors that increased income before interest, income taxes, and extraordinary item:

- higher gross margin of \$177 million for the Regulated Nuclear Generation segment as a result of higher electricity generation of 3.4 terawatt hours (TWh), due to fewer unplanned outage days at the Darlington and Pickering nuclear generating stations
- higher revenue of \$132 million from the Regulated Hydroelectric segment primarily due to higher electricity spot market prices during the first quarter of 2014 as a result of the unseasonably cold winter, partially offset by lower electricity spot market prices later in the year
- higher earnings on the Used Fuel Segregated Fund (Used Fuel Fund) of \$79 million primarily due to a higher return on the Used Fuel Fund related to the first 2.23 million used fuel bundles
- higher earnings of \$53 million from the six new hydroelectric units constructed as part of the Lower Mattagami River project, which were declared in service in 2014
- lower salary costs of \$57 million due to improved business efficiencies reflected in lower staff numbers
- increase in net trading revenue of \$51 million primarily due to higher margins from physical energy sold to neighbouring markets as a result of unseasonably cold temperatures and high natural gas prices in the first quarter of 2014
- lower nuclear operations, maintenance and administration (OM&A) expenses as a result of lower outage costs in 2014
- lower restructuring expense due to the recognition of severance costs of \$50 million in 2013 related to the Lambton, Nanticoke, and Thunder Bay stations.

Significant factors that reduced income before interest, income taxes, and extraordinary item:

- write-off of \$77 million as a result of a regulatory disallowance by the OEB related to the Niagara Tunnel project
- higher accretion expense of \$41 million which reflects the increase in fixed asset removal and nuclear waste management liabilities in 2014, compared to 2013, due to the increase in the present value of the underlying obligation to reflect the passage of time
- lower revenue of \$30 million from the Thunder Bay GS, primarily due to lower contract revenue due to the expiry of the reliability must run contract at the end of 2013.

Income tax expense increased by \$108 million in 2014, compared to 2013, largely as a result of the increase in income in 2014.

Forty-eight of OPG's previously unregulated hydroelectric facilities were prescribed for rate regulation beginning in 2014 pursuant to an amendment to *Ontario Regulation 53/05*. During 2014, OPG recognized additional regulatory assets related to previously recognized deferred income taxes expected to be recovered from customers through future regulated prices in respect of these newly regulated facilities, resulting in an extraordinary gain of \$243 million in the consolidated statements of income.

#### Segment Results

The following table summarizes OPG's income before interest, income taxes, and extraordinary item by business segment for the years ended December 31. Significant factors which contributed to the higher income during 2014, compared to 2013, are discussed above. A detailed discussion of OPG's performance by reportable segment is included in the section *Discussion of Operating Results by Business Segment*.

(millions of dollars)	2014	<b>2013</b> (adjusted)
Income (loss) before interest, income taxes, and extraordinary item		
Regulated – Nuclear Generation	217	(24)
Regulated – Hydroelectric	502	405
Contracted Generation Portfolio	111	(49)
Total electricity generation business segments	830	332
Regulated – Nuclear Waste Management	(76)	(122)
Services, Trading, and Other Non-Generation	33	¥2́
	787	252

#### **Electricity Generation**

Electricity generation for the years ended December 31 was as follows:

(TWh)	2014	<b>2013</b> (adjusted)
Regulated – Nuclear Generation Regulated – Hydroelectric	48.1	44.7
Existing regulated hydroelectric generating stations	19.2	18.9
Hydroelectric generating stations prescribed for rate regulation beginning in 2014	12.1	12.5
Contracted Generation Portfolio <sup>1</sup> Total OPG electricity generation	<u>2.8</u> 82.2	4.7
Total electricity generation by all other generators in Ontario	72.2	73.7

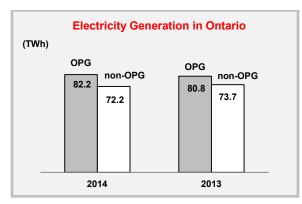
<sup>1</sup> Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

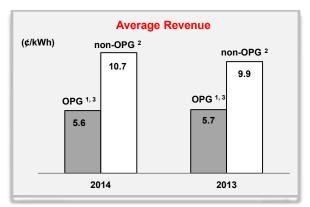
The increased generation in 2014, compared to 2013, was primarily a result of:

- higher electricity generation from the Regulated Nuclear Generation segment due to fewer unplanned outage days at the Darlington GS and Pickering GS
- an increase in generation from OPG's existing regulated hydroelectric stations due to higher water flows during 2014 on the Niagara and St. Lawrence Rivers, partially offset by
- lower electricity generation from the Contracted Generation Portfolio segment due to ceasing operation of coal-fired units at the Lambton and Nanticoke generating stations in 2013, in accordance with the Shareholder declaration issued in March 2013
- lower generation from OPG's hydroelectric generating stations prescribed for rate regulation beginning in 2014 due to an increase in the prevalence of surplus baseload generation (SBG) conditions in 2014, described below.

OPG's operating results are affected by changes in electricity demand resulting from variations in seasonal weather conditions and changes in economic conditions. Ontario's primary demand was 139.8 TWh in 2014, down slightly from 140.7 TWh in 2013. Baseload supply surplus to Ontario demand continued to increase in 2014 as a result of lower primary demand combined with increased baseload generation mainly from Units 1 and 2 of the Bruce A GS, and new wind and solar capacity. The surplus to the Ontario market is managed by the IESO, mainly through

generation reductions at hydroelectric stations, nuclear stations, and grid-connected renewable resources. Generation reductions at hydroelectric stations for SBG management will often result in spilling of water. As dispatching hydroelectric units down to reduce production is the first measure the IESO uses to manage SBG, OPG's hydroelectric generation was significantly affected, reducing generation by approximately 3.2 TWh in 2014. The net income impact of SBG conditions on OPG's existing regulated hydroelectric stations and, beginning November 1, 2014, the newly regulated hydroelectric stations was offset by the impact of a regulatory variance account. Of OPG's 3.2 TWh of lost generation due to SBG conditions, the volume that was offset by an OEB-authorized regulatory variance account during 2014 was 1.9 TWh.





- <sup>1</sup> Average revenue for OPG (OPG Average Revenue) is comprised of regulated revenues, market based revenues, revenues from ESAs, and other energy revenue from cost recovery agreements. In 2014, average revenue for OPG excludes the revenue from the cost recovery agreement for costs related to the Nanticoke GS and Lambton GS as these stations ended coal-fired operation in 2013. Average revenue for OPG also excludes OPG's share of revenues and generation from PEC and Brighton Beach.
- <sup>2</sup> Average revenue for other electricity generators (Non-OPG Average Revenue) is comprised of hourly Ontario demand multiplied by the HOEP, plus total global adjustment payments, plus the sum of hourly net exports multiplied by the HOEP, less OPG's generation revenue.
- <sup>3</sup> Regulated revenues included in the average revenue for OPG reflect regulated prices, including rate riders established by the OEB. Refer to the section *Revenue Mechanisms for Regulated and Unregulated Generation* for the regulated prices in effect during 2014 and 2013.

#### Average Revenue and Average Sales Prices

OPG's average revenue reflects the average sales prices for all of its electricity generation segments. The majority of OPG's generation is from the Regulated – Nuclear Generation and Regulated – Hydroelectric segments. The regulated prices authorized by the OEB for electricity generated from nuclear facilities operated by OPG and OPG's regulated hydroelectric generating stations are discussed in the section *Revenue Mechanisms for Regulated and Unregulated Generation*.

The average sales price for the Regulated – Nuclear Generation segment during 2014 was 5.6 ¢/kWh compared to 5.7 ¢/kWh during 2013. The decrease was primarily due to a lower rate rider during 2014 related to the recovery of approved variance and deferral account balances, partially offset by a higher OEB approved base regulated price, effective November 1, 2014.

The average sales price for the Regulated – Hydroelectric segment during 2014 was 4.0 ¢/kWh compared to 3.5 ¢/kWh during 2013. The increase was primarily due to higher sales prices received during the first quarter of 2014, compared to the same quarter in 2013, for the production from the 48 hydroelectric stations which were prescribed for rate regulation beginning in 2014. Prior to the OEB's order establishing regulated prices for these stations effective November 1, 2014, the revenue for generation from these stations was based on the Ontario electricity spot market price. The average sales price for these stations during 2014 was 5.0 ¢/kWh compared to 2.8 ¢/kWh during 2013. The increase in 2014 was primarily due to the unseasonably cold temperatures during the first quarter of 2014, compared to the same quarter in 2013, which led to higher natural gas prices and higher Ontario primary demand.

#### **Cash Flow from Operations**

Cash flow provided by operating activities for 2014 was \$1,433 million, compared to \$1,174 million for 2013. The increase in operating cash flow was primarily the result of higher cash receipts from generation and lower nuclear OM&A expenses in 2014. Higher cash receipts from generation was primarily due to fewer outage days at OPG's nuclear stations, higher electricity spot market prices resulting from the unseasonably cold temperatures during the first quarter of 2014, and revenue from the existing and new units in the Lower Mattagami River project. The increase in operating cash flow was partially offset by lower cash receipts from lower rate riders for regulated generation in 2014.

#### **Funds from Operations Interest Coverage**

Funds from Operations (FFO) Interest Coverage is an indicator of OPG's ability to meet interest obligations from operating cash flows. The FFO Interest Coverage remained at 2.8 times for 2014 and 2013. The FFO Interest Coverage in 2014 reflects an increase in operating cash flows in 2014, compared to 2013, offset by the impact of higher adjusted interest expense used in the calculation of the indicator. The increase in interest expense was primarily due to higher pension and OPEB discount rates at the end of 2013 and an increase in pension and OPEB benefit obligations.

The FFO Interest Coverage is not a measure in accordance with US GAAP. It should not be considered as an alternative measure to net income, cash flows from operating activities, or any other measure of performance under US GAAP. OPG believes that this non-GAAP financial measure is an effective indicator of performance and is consistent with its corporate strategy to operate on a financially sustainable basis. The definition and reconciliation of FFO Interest Coverage can be found under the headings, *Key Generation and Performance Indicators* and *Supplementary Non-GAAP Financial Measures*, respectively.

### **Return on Equity**

Return on Equity (ROE) is an indicator of OPG's performance consistent with its objectives to operate on a financially sustainable basis and to maintain value for the Shareholder. ROE is measured over a 12-month period.

ROE for 2014 was 8.5 percent, compared to 1.5 percent for 2013. ROE increased for the year primarily due to higher net income attributable to the Shareholder, including an extraordinary gain of \$243 million recognized in 2014 related to the 48 hydroelectric facilities prescribed for rate regulation beginning in 2014. The 2014 ROE, calculated using net income attributable to the Shareholder excluding extraordinary gain, was 6.0 percent, which was also an improvement over the 2013 ROE of 1.5 percent.

OPG's ROE reflects the relatively higher equity component in its capital structure, compared to the capital structure used by the OEB in determining regulated prices. The OEB establishes the allowed return on OPG's investment in regulated assets, which represent approximately 90 percent of the Company's operations, using a prescribed rate of return and a deemed capital structure. In its November 2014 decision, the OEB adjusted the deemed capital structure to 45 percent equity and 55 percent debt, from 47 percent equity and 53 percent debt. OPG's actual capital structure (excluding accumulated other comprehensive income (AOCI)) contains approximately 60 percent equity. The higher equity component in OPG's actual capital structure, compared to the deemed capital structure prescribed by the OEB, results in a reduced actual ROE.

ROE is not a measure in accordance with US GAAP. It should not be considered an alternative measure to net income, cash flows from operating activities, or any other performance measure under US GAAP. The definition and reconciliation of ROE can be found under the headings, *Key Generation and Performance Indicators* and *Supplementary Non-GAAP Financial Measures*, respectively.

#### **Recent Developments**

#### OPG's OEB Applications

### New Regulated Prices and Regulation of Previously Unregulated Hydroelectric Facilities

The OEB's decision on OPG's September 2013 application for new regulated prices for its nuclear and existing regulated hydroelectric generation was issued on November 20, 2014, following a public hearing process. This decision was followed by the OEB's order on December 18, 2014 establishing new regulated prices for these facilities effective November 1, 2014. Consistent with the effective date of the decision, for the period from January 1, 2014 to October 31, 2014, OPG continued to record additions to the existing variance and deferral accounts for the nuclear and existing regulated hydroelectric facilities pursuant to the OEB's previous decisions and orders. These additions reflected differences between actual and forecast amounts embedded in the regulated prices in effect prior to November 1, 2014. The cost of service regulated prices and rate riders for 2014 and 2013 are outlined under the section, *Revenue Mechanisms for Regulated and Unregulated Generation*.

The OEB's decision and order also established a regulated price for the generation from OPG's 48 previously unregulated hydroelectric facilities, which were prescribed for rate regulation effective July 1, 2014 pursuant to an amendment to *Ontario Regulation 53/05*. In establishing the regulated price for these facilities effective November 1, 2014, the OEB determined that the price for the generation from these facilities for the period from July 1, 2014 to October 31, 2014 would be based on the Ontario electricity spot market price, which these facilities had continued to receive during this period on an interim basis pursuant to an earlier order by the OEB. The accounting impact of applying rate-regulated accounting to the newly regulated hydroelectric facilities is discussed under the heading, *Critical Accounting Policies and Estimates*.

The new regulated prices for all of OPG's regulated facilities were established using a two-year forecast cost of service methodology based on revenue requirements, taking into account a forecast of production and operating costs for the regulated facilities and a return on rate base. Rate base is a regulatory construct that represents the average net level of investment in regulated fixed and intangible assets, and an allowance for working capital.

The OEB determined the new regulated prices for the nuclear and existing regulated hydroelectric facilities based on a total OEB-approved 24-month revenue requirement for 2014 and 2015 of \$7.3 billion. This reflected a reduction of \$833 million from the revenue requirement submitted. The regulated price for the 48 newly regulated hydroelectric facilities was established based on an approved 18-month revenue requirement for July 1, 2014 to December 31, 2015 of \$752 million, a reduction of \$101 million from OPG's submission. The most significant adjustments to OPG's rate application request were as follows:

- Allowed pension and OPEB amounts were limited to a forecast of OPG's 2014 and 2015 cash expenditures for its pension and OPEB plans, which were approximately \$600 million lower, including related tax impacts, than OPG's submission based on forecast accrual costs. While this negatively affects OPG's cash flows, OPG's 2014 income was not materially affected, as the OEB also authorized a deferral account for the difference between OPG's cash expenditures on pension and OPEB plans and accrual costs. The regulatory treatment and future recovery of pension and OPEB costs is discussed further below
- A reduction in overall compensation costs of \$100 million in each of 2014 and 2015 across all regulated facilities
- An increase in the forecast nuclear production of 0.5 TWh annually used to set the regulated prices, which had the effect of further reducing the approved nuclear regulated price
- In establishing the new regulated price for OPG's existing regulated hydroelectric generation, the OEB approved the inclusion of \$1,365 million in rate base related to the Niagara Tunnel project, which was declared in-service in March 2013. This resulted in a write-off of \$77 million, which was charged to operations in 2014

• In establishing the new regulated price for OPG's nuclear generation, the OEB directed OPG to reduce the 2014 forecast regulatory income tax expense as a result of a regulatory tax loss calculated for 2013, which further reduced the revenue requirement by approximately \$70 million.

In December 2014, OPG filed a motion asking the OEB to review and vary the parts of its decision related to the disallowance of the Niagara Tunnel expenditures, and the application of the 2013 regulatory tax loss to reduce the 2014/2015 revenue requirement. The hearing on the motion has been scheduled for the end of March 2015.

As part of its decision and order, the OEB also approved for recovery, without adjustments, the balances in four variance and deferral accounts as at December 31, 2013 totalling \$189 million. The OEB authorized the recovery of these balances over a 12-month period, through rate riders for nuclear and existing regulated hydroelectric generation effective from January 1, 2015 to December 31, 2015. In addition, the OEB approved OPG's submitted forecast for 2014 and 2015 non-capital costs and in-service capital additions related to the Darlington Refurbishment project.

The OEB also approved the continuation of previously authorized variance and deferral accounts and, effective November 1, 2014, extended all applicable accounts to the newly regulated hydroelectric facilities, as requested by OPG. Variance and deferral accounts related to the existing and newly regulated facilities are discussed further in Note 5 of OPG's audited consolidated financial statements.

#### Pension and OPEB Cost Recovery Methodology

Using the methodology previously applied by the OEB in setting OPG's regulated prices, the revenue requirements submitted by OPG in its September 2013 application included a forecast of pension and OPEB costs for 2014 and 2015 determined on an accrual basis in accordance with US GAAP. In its decision and order, the OEB approved revenue requirements based on OPG's estimated minimum contributions to its registered pension plan, and a forecast of OPG's expenditures on the OPEB and supplementary pension plans. In directing this reduction, the OEB agreed with OPG and certain other parties that a generic proceeding on the regulatory treatment and recovery of pension and OPEB costs would be beneficial. The OEB also indicated that a transition to a cash basis of recovery for pension and OPEB amounts for OPG, if required, would be addressed in a future OPG rate proceeding.

Pending the generic proceeding, the OEB established the Pension & OPEB Cash Versus Accrual Differential Deferral Account. Effective November 1, 2014, this deferral account records the difference between OPG's actual pension and OPEB costs for the regulated business determined on an accrual basis and the corresponding actual cash expenditures for these plans. OPG recorded a regulatory asset of \$36 million for this deferral account, with a corresponding reduction to OM&A expenses, for the two month period from November 1, 2014 to December 31, 2014. The OEB indicated that the disposition of the balance in the account will be based on the outcome of the generic proceeding. The scope and timing of the generic proceeding has not been announced by the OEB.

### Application to Recover Balances in Variance and Deferral Accounts

In December 2014, OPG filed an application with the OEB requesting additional nuclear and regulated hydroelectric rate riders, effective July 1, 2015, for disposition of the December 31, 2014 balances, not already being recovered or repaid, in most of the OEB-authorized variance and deferral accounts as at December 31, 2014. The application requests the recovery or repayment of these balances to be reflected in new rate riders beginning on July 1, 2015. As updated for actual December 31, 2014 balances, OPG's application requests rate riders for nuclear and regulated hydroelectric generation of \$15.57/MWh and \$3.55/MWh, respectively, based on variance and deferral account balances sought for recovery of approximately \$1.8 billion. The requested regulated hydroelectric rate rider would apply to the generation from both the existing and newly regulated hydroelectric stations. The decision on OPG's application will be made by the OEB following a public hearing process, which commenced in the first quarter of 2015.

#### New Generating Assets In-Service

During 2014, the following assets were declared in-service:

- Lower Mattagami River project: During 2014, all six new generating units were placed in-service, ahead of the target completion date and within the approved budget of \$2.6 billion. The project has increased the capacity of the four generating stations on the Lower Mattagami River by 438 MW.
- Atikokan Biomass Conversion: In July 2014, OPG completed the conversion of the Atikokan GS from coal to biomass fuel, ahead of its original target completion date. The project cost is expected to be within the budget of \$170 million. The converted station has a capacity of 205 MW and is the largest generating station in North America fuelled by 100 percent biomass.

OPG completed the conversion of one unit at the Thunder Bay GS to advanced biomass fuel and declared the unit in commercial operation in January 2015. The conversion of the unit was completed ahead of schedule and within the approved budget of \$7 million.

OPG's major generation development projects are discussed under the heading, Project Excellence.

#### Power Workers' Union Collective Agreement

The Power Workers' Union (PWU) represents approximately 5,600 OPG employees or approximately 58 percent of OPG's regular workforce. The current collective agreement between OPG and the PWU has a three-year term, which expires on March 31, 2015. Negotiations for a new labour agreement with the PWU are currently underway.

#### CORE BUSINESS AND STRATEGY

OPG's mandate is to reliably and cost-effectively produce electricity from its diversified portfolio of generating assets, while operating in a safe, open, and environmentally responsible manner. OPG's mission is to be Ontario's low cost electricity generator through a focus on three corporate strategies:

- Operational Excellence
- Project Excellence
- Financial Sustainability.

#### **Operational Excellence**

OPG is committed to excellence in the areas of generation, safety and the environment. Operational excellence at OPG's nuclear, hydroelectric, and thermal generating facilities is accomplished by generating electricity in a safe, reliable, and cost-effective manner.

#### Nuclear Generating Assets

Operational excellence at OPG's nuclear generating facilities is defined as safely and reliably generating costeffective electricity. The four cornerstones of all nuclear operations are safety, reliability, human performance, and value for money. Employee, environmental, and nuclear safety are overriding priorities.

During 2014, the nuclear facilities demonstrated strong performance and continuous improvement against industry benchmarks. Nuclear practices and processes are regularly benchmarked against top performing nuclear facilities around the world. This allows OPG to identify, develop, and implement initiatives to further improve performance. The key achievements in 2014 include:

• In April 2014, the Darlington GS received its second consecutive excellent safety and performance evaluation from the World Association of Nuclear Operators.

- In August 2014, the Canadian Nuclear Safety Commission (CNSC) presented its Staff Integrated Safety
  Assessment of Canadian Nuclear Power Plants for 2013. The Darlington GS achieved the highest possible
  safety and control rating, its fifth consecutive excellent performance evaluation. The Pickering GS also
  received positive safety and control ratings from the CNSC staff, with improved performance recognized in
  the areas of radiation protection and security.
- In January 2015, the CNSC recognized OPG's efforts regarding its Fukushima action plan and confirmed that all of the Fukushima action items are now closed. OPG's Fukushima implementation plan included a number of key safety enhancements on providing additional back-up capability to increase OPG's flexibility to respond to unexpected and highly unlikely external events that can impact multiple nuclear units at the same time. CNSC staff concluded that OPG has strengthened reactor defence and enhanced its emergency response at both the Darlington GS and Pickering GS in response to lessons learned from the Fukushima incident.

These achievements demonstrate OPG's strong focus on safety and commitment to operational excellence.

During 2014, generation and reliability at the nuclear stations improved as a result of a decrease in unplanned outage days at the stations. This is further discussed under the heading, *Electricity Generation* and section *Highlights*, and under the heading *Regulated – Nuclear Generation Segment* and section *Discussion of Operating Results by Business Segment*.

In 2013, the CNSC approved a five-year operating licence which combined the Pickering A and B nuclear generating stations' licences into a single-site licence. A regulatory hold point was added to the licence related to fuel channels and the original assumed end-of-life dates for Pickering Units 5 to 8. To satisfy these, OPG provided the results of additional safety assessments in a May 2014 Commission Hearing with public participation, as required by the CNSC. In June 2014, the CNSC approved OPG's request to remove the hold point on the licence. The removal of this hold point authorizes the Pickering GS to proceed with plans to operate Units 5 to 8 to 2020. OPG's current licence for the Pickering GS expires on August 31, 2018.

OPG strives to operate and maintain its nuclear facilities to optimize equipment, performance, availability, and electricity generation. Improved equipment reliability generally results in greater nuclear safety and fewer generation interruptions. OPG has made investments to continue to improve the performance of the Pickering GS through to 2020 with a focus on implementing equipment modifications and fuel handling reliability improvements, reducing degraded and broken equipment backlogs, and completing 3,000 work orders of critical/high priority work. Investments in the Pickering GS will help to ensure a reliable electricity supply for Ontario while the Darlington GS reactors are being refurbished. OPG is seeing positive results of that work, including engineering and research assessments that support the safe and reliable operation of the units to their end-of-life. In January 2015, Pickering Unit 5 achieved 523 days of continuous on-line operation since its last planned outage, the second best at the station. OPG is developing resource strategies, including workforce planning, to the end of commercial operations of the Pickering GS, which is expected in 2020, through to the end of the safe storage period.

The successful execution of nuclear outages continues to be a high priority. OPG continues to improve the planning, execution, monitoring, and reporting of outage work. Nuclear inspection and testing programs are largely driven by maintenance and regulatory requirements. These programs are designed to ensure that equipment is performing reliably and safely. The planned outage programs at Pickering Units 5 to 8 also reflect OPG's objective of operating the Pickering units to 2020. In addition, planning activities progressed well in 2014 in preparation for the Vacuum Building Outage (VBO) scheduled to be performed at the Darlington GS in 2015. During the VBO, inspection and testing of key components of the negative pressure containment system will be completed, as well as unit inspections and maintenance activities that include pressure and steam generator inspections, and turbine, generator and valve maintenance. For the Darlington GS, a station-wide VBO is required every 12 years and will require the shutdown of all four units for the duration of the outage. Approximately 1,000 workers will augment station resources to complete the outage work programs, which comprises approximately 40,000 tasks. This is the last VBO prior to the execution

of the Darlington Refurbishment project and, therefore, its execution is a critical step in ensuring the project's success.

Process and procedural compliance is monitored and managed to ensure a strong safety and performance culture at the nuclear stations. OPG continues to implement training programs to improve employee performance and promote leadership development.

Delivering solutions that provide the best combination of safety, cost, and effectiveness, as well as establishing challenging financial targets based on comprehensive benchmarking continues to be a vital part of OPG's strategy to improve performance. Staffing targets continue to be reviewed and adjusted where necessary to reduce operating costs, while ensuring safety is not compromised.

In December 2013, OPG submitted a licence renewal application to the CNSC for the Darlington GS that would span the refurbishment period. The hearing dates for the licence renewal application have not been scheduled, but are expected to take place in August and November 2015. The existing licence for the Darlington GS station expires on December 31, 2015.

#### Hydroelectric Generating Assets

OPG's hydroelectric stations that are currently prescribed for rate regulation are included in the Regulated – Hydroelectric segment. Hydroelectric stations that are not subject to rate regulation by the OEB are included in the Contracted Generation Portfolio segment. A description of OPG's reportable business segments is included in the section *Business Segments*.

OPG's hydroelectric facilities are focused on producing electricity in a safe, reliable, cost-effective, and environmentally responsible manner.

OPG has the following objectives for its hydroelectric facilities:

- sustain and improve the existing assets for long-term operations
- operate and maintain the facilities in an efficient and cost-effective manner
- seek to expand existing stations, where economic
- maintain and improve reliability performance, where practical and economic
- maintain an excellent employee safety record
- strive for continuous improvement in the areas of dams and waterways, public safety, and environmental performance
- build and improve relationships with First Nations and Métis.

As part of OPG's ongoing strategy to reduce costs and increase efficiency, the operations of its hydroelectric and thermal assets were combined into one organization in regions where opportunities existed to more effectively utilize resources. This was successfully accomplished in both Northwestern and Eastern Ontario regions during 2014. This allowed for a reduction in the number of senior managers and staff by combining reporting and centre-led support functions.

A Dam Safety Review Panel, comprised of internationally recognized experts, has previously concluded that OPG's Dam and Public Safety Program compares with international best practices in a number of areas related to maintaining safe dam operation. OPG continues to develop a new risk-informed approach on behalf of the Ontario Ministry of Natural Resources and Forestry (MNRF) to prioritize and manage risks identified through dam safety assessments. This approach is expected to result in benefits with respect to both safety and costs for future upgrades to existing infrastructure.

OPG continues to evaluate and implement plans to increase capacity, maintain performance, and extend the operating life of its hydroelectric generating assets. These plans are expected to be accomplished through refurbishment or replacement of existing turbine runners, generators, transformers, and controls. This includes

increasing the total capacity of hydroelectric generating stations by approximately 45 MW over the next five years. OPG is also planning to repair, rehabilitate, or replace a number of aging civil structures in the next five years.

During 2014, OPG continued to execute a number of projects, and completed major equipment overhauls and rehabilitation work at several stations. These include:

- completion of major equipment overhauls and rehabilitation work on Unit 5 of the Des Joachims GS, Unit 3 of the Pine Portage GS, and Unit 11 of the R.H. Saunders GS
- completion of a transformer bank replacement at the Pine Portage GS
- completion of the rehabilitation of Unit 3 of the Sir Adam Beck Pump GS
- continued work on the rehabilitation of Unit 5 of the Sir Adam Beck Pump GS, Unit 1 of the Lower Notch GS, and Unit 2 of the Aguasabon GS.

OPG's major hydroelectric development projects are discussed under the heading, Project Excellence.

#### Thermal Generating Assets

OPG's three operating thermal generating stations operate as peaking facilities, depending on electricity demand. This provides Ontario's electricity system with the flexibility to meet changing daily system demand and capacity requirements, and enables the system to accommodate the expansion of Ontario's renewable generation portfolio.

In April 2014, OPG ended coal-fired generation at the Thunder Bay GS. This marks the end of coal-fired generation by OPG, ahead of the December 31, 2014 deadline mandated by the Province.

Thermal assets that are no longer available to generate electricity are included in the Services, Trading, and Other Non-Generation segment once the assets are removed from service. With the end of coal-fired generation at the Lambton GS and the Nanticoke GS in 2013, OPG continues to preserve the option to convert these stations to natural gas and/or biomass in the future. Converted thermal generating stations can provide Ontario's electricity system with continued flexibility of daily start up and shut down, load-following capability to meet changing system needs, and complement non-dispatchable renewable energy sources. The activities required to preserve this option are reflected in the Services, Trading, and Other Non-Generation segment starting in 2014. OPG is seeking recovery of ongoing costs to preserve the option to convert the units. If recovery is not allowed, OPG will consider all options regarding the future of these stations, including full site closure and decommissioning. The decision to continue to incur preservation costs, in the absence of a cost recovery mechanism, will be revisited in the first half of 2015.

In 2009, OPG entered into a Contingency Support Agreement with the OEFC, following the implementation of CO<sub>2</sub> emissions targets/caps consistent with good utility practice, to maintain the Lambton and Nanticoke generation stations for supply adequacy and system reliability by providing OPG with sufficient revenue to recover the actual direct costs of the stations, and to provide reimbursement of capital expenditures through the recapture of depreciation up to December 31, 2014. As a result of the Shareholder declaration issued in March 2013 mandating that OPG cease the use of coal at the Nanticoke GS and the Lambton GS by the end of 2013 in advance of the previous December 31, 2014 deadline, OPG and the OEFC executed an amendment to the Contingency Support Agreement. The amendment allowed for early termination of the agreement and for OPG to recover actual costs that could not reasonably be avoided or mitigated during the period from the date of the advanced shutdown up to the end of 2014. On November 1, 2013, the OEFC provided written notice that it would terminate the Contingency Support Agreement, effective December 31, 2013, thus triggering the amendment that allowed OPG to recover these costs during 2014. Any preservation costs or staff relocation costs related to the Lambton GS and the Nanticoke GS that were incurred during 2014 are not recoverable under the Contingency Support Agreement.

# Environmental Performance

OPG's Environmental Policy states that "OPG shall meet all legal requirements and any environmental commitments that it makes, with the objective of exceeding these legal requirements where it makes business sense". This policy commits OPG to:

- establish and maintain an environmental management system (EMS)
- work to prevent or mitigate adverse effects on the environment with a long-term objective of continual improvement
- manage its sites in a manner that strives to maintain, or where it makes business sense, enhance significant natural areas and associated species at risk.

Environmental performance targets also form part of OPG's annual business planning process. Performance is monitored and communicated to internal and external stakeholders.

OPG monitors emissions to air and water, and regularly reports the results to regulators, including the Ontario Ministry of the Environment and Climate Change, Environment Canada, and the CNSC. The public also receives ongoing communications regarding OPG's environmental performance. In 2014, OPG maintained ISO 14001 registration of its company-wide EMS. Within this EMS, OPG has developed and implemented internal monitoring, assessment, and reporting programs to manage environmental risks. These risks include air and water emissions, discharges, spills, the treatment of radioactive emissions, and radioactive wastes. OPG also continues to address historical land contamination through a voluntary land assessment and remediation program. Further details regarding OPG's environmental risks can be found under the section *Risk Management*.

OPG's environmental performance for 2014 met or outperformed targets for spills, infractions, production of low and intermediate level radiological waste, volume of non-processible radioactive waste shipped, and carbon-14 air emissions. Tritium emissions to air and water did not meet targets, but remained less than one percent of the regulatory limit.

Radiation exposure to members of the public is estimated on an annual basis for those individuals who live or work near the nuclear generating stations. The annual dose to the public resulting from operations of each nuclear facility is expressed in microsieverts ( $\mu$ Sv) which is an international unit of radiation dose measurement. For 2013, the annual public doses resulting from the Darlington GS operations and the Pickering GS operations were 0.6  $\mu$ Sv and 1.1  $\mu$ Sv, respectively, which is approximately 0.1 percent of the annual legal limit of 1,000  $\mu$ Sv. The doses resulting from the 2014 operating year will not be finalized until the second quarter of 2015. They are not expected to differ significantly from the 2013 levels.

In response to the Ministry of Energy's mandate to end coal-fired generation by December 31, 2014, OPG ended all coal-fired operations in April 2014, as all existing coal inventory was utilized in the last coal-fired unit at the Thunder Bay GS. As a result, emissions from coal-fired generation were minimal in 2014.

For the years ended December 31,  $CO_2$  and acid gas emissions from OPG's coal-fired stations were as follows:

	2014	2013
$CO_2$ (million tonnes)	0.12	3.16
SO <sub>2</sub> and NO <sub>x</sub> (gigagrams)	0.46	14.73

To further reduce greenhouse gas (GHG) emissions, OPG is implementing the use of biofuels. The conversion of the Atikokan GS to use biomass fuel was completed in July 2014 and the conversion of one unit at the Thunder Bay GS to use advanced biomass fuel was completed in January 2015.

Details of OPG's environmental performance and further initiatives to fulfil the Company's Environmental Policy are available in OPG's 2013 Sustainable Development Report, available on the Company's website at <u>www.opg.com</u>.

# <u>Safety</u>

OPG is committed to achieving excellent safety performance and striving for continuous improvement with the ultimate goal of zero injuries. Safety performance is measured using two primary indicators:

- All Injury Rate (AIR)
- Accident Severity Rate (ASR).

Overall, OPG's safety performance is consistently one of the best amongst its comparator Canadian electrical utilities. In November 2014, OPG was recognized by the Canadian Electricity Association for the second consecutive year for achieving top quartile performance amongst comparable utilities with its 2013 AIR and ASR results. Based on OPG's results, including achieving its best AIR performance ever in 2014, it is expected that OPG will remain one of the best amongst its comparator Canadian electrical utilities in 2015.

	2014	2013
AIR (injuries per 200,000 hours worked)	0.36	0.61
ASR (days lost per 200,000 hours)	1.31	0.94

OPG remains steadfast in its commitment to safety excellence, sustaining a strong safety culture and continuous improvement in safety management systems. In 2014, OPG successfully implemented an integrated health and safety management system and operational risk control procedures across the Company. This initiative created a single health and safety management system for OPG and consolidated all health and safety governance into one system, increasing efficiency and providing consistent performance expectations across the corporation.

In 2014, OPG launched its Total Health initiative. This initiative aims to create a health culture, similar to OPG's existing safety culture that supports employees and their families in their efforts to achieve an optimal level of health and functioning through health education, health promotion, disease and injury prevention, and crisis intervention.

OPG's contractors are expected to conduct work safely at OPG sites. In support of this expectation, OPG implemented a new contractor pre-qualification process and developed contractor safety governance while providing on-site safety support for many of OPG's major projects.

# **Project Excellence**

OPG is pursuing several generation development projects. OPG's major projects include the Darlington Refurbishment, new hydroelectric generation and plant expansions, the repository for the management of low and intermediate level waste (L&ILW), and the conversion of coal-fired generating units to alternative fuels.

Project	Cap expend		Approved budget	Planned in-service	Status
(millions of dollars)	Year-to-date	Life-to-date		date	
Darlington Refurbishment	696	1,462			A budget and schedule for the refurbishment of the four units are expected to be completed in 2015. See update below.
Lower Mattagami	387	2,369	2,600	June 2015	All six new units have been placed in- service ahead of schedule and on budget. See update below.
Deep Geologic Repository for Low and Intermediate Level Waste <sup>1</sup>	12 <sup>1</sup>	179 <sup>1</sup>			See update below.
Atikokan Biomass Conversion	24	168	170	August 2014	Construction completed ahead of schedule and costs are expected to be within budget. See update below.

The status of OPG's major projects as of December 31, 2014 is outlined below.

<sup>1</sup> Expenditures are funded by the nuclear fixed asset removal and nuclear waste management liabilities.

## Darlington Refurbishment

The Darlington generating units are currently forecast to reach their average end-of-life between 2019 and 2020. Refurbishment of the four generating units will extend the operating life of the Darlington GS by approximately 30 years. The Darlington Refurbishment project is a multi-phase program comprised of the following five major project work packages:

- Retube and Feeder Replacement
- Turbines and Generators
- Defueling and Fuel Handling
- Steam Generators
- Balance of Plant.

The definition phase of the project is well under way and is on track to be completed in 2015. In 2016, the first unit outage will commence and OPG will start execution of the refurbishment scope on that unit.

As part of the CNSC's regulatory requirements outlined in *RD-360: Life Extension of Nuclear Power Plants* (RD-360), OPG completed a series of assessments for the Darlington Refurbishment project. Key milestones include the following:

- OPG submitted the Global Assessment Report in December 2013 and it was accepted by the CNSC in April 2014 as meeting all regulatory requirements of RD-360.
- The environmental assessment (EA) was accepted by the CNSC in December 2012 as having met regulatory requirements. In April 2013, the EA was subsequently challenged by way of a judicial review on the grounds that the EA failed to comply with requirements of the *Canadian Environmental Assessment Act*, *2012* (the Act) and that the hearing deprived the applicants certain procedural rights. In November 2014, after a detailed review of all of the evidence presented, the court dismissed the challenge and it was concluded that the CNSC and Fisheries and Oceans Canada committed no error in their decision under the Act. In December 2014, four environmental groups have appealed the federal court ruling.

- In July 2013, OPG received the CNSC's staff assessment of the Integrated Safety Review (ISR), which
  confirmed that the ISR meets applicable regulatory requirements. OPG is required to identify and address
  any new revisions to the Darlington ISR Basis Codes along with any new significant industry experience. In
  February 2014, this update was completed and provided to the CNSC. No new significant scope items were
  identified as a result of this review.
- In December 2014, CNSC staff notified OPG that the regulatory scope defined in the Integrated Implementation Plan (IIP) was accepted and is unlikely to change. The CNSC have requested that OPG submit an updated version of the IIP to address some minor non-intent changes that were identified during their review. OPG expects to submit the IIP update in May 2015 for inclusion in the licence renewal hearing in August 2015. Approval of the IIP is expected to be obtained from the CNSC as part of the renewal of the Darlington GS operating licence by December 31, 2015.

In November 2014, OPG's Board of Directors approved the funding for the remainder of the refurbishment's definition phase. This request included funding for 2015 deliverables in the amount of \$1,124 million, and reconfirmed the program life cycle high confidence cost estimate at less than \$10 billion in 2013 dollars, excluding capitalized interest and escalation. A budget and schedule for the four-unit refurbishment are expected to be completed and presented to the Board of Directors for approval in November 2015.

In 2014, OPG completed the mock-up facility as part of the Darlington Energy Complex which is a critical step in the Darlington Refurbishment project. There are a number of pre-requisite projects currently underway at the Darlington GS to be completed in advance of the execution phase of the project. One of the pre-requisite projects, the Heavy Water Storage and Drum Handling Facility, has experienced construction challenges. OPG has established a revised plan to mitigate the construction complexities and schedule risks, including contingency plans to avoid potential impacts on the Darlington Refurbishment project schedule.

The Retube and Feeder Replacement project is the largest work package of the Darlington Refurbishment project and represents a majority of the critical path schedule. The Retube and Feeder Replacement mock-up facility as part of the Darlington Energy Complex was made available for service ahead of schedule in the first quarter of 2014, enabling the next critical phase of tooling prototype development and testing. In September 2014, the first retube platform was installed at the mock-up facility, allowing for the start of prototype tool testing, which represents the final phase of tooling development.

The remaining major project work packages, including Turbines and Generators, Defueling and Fuel Handling, Steam Generators, and Balance of Plant are on schedule.

#### New Nuclear Units

The Government of Ontario's 2013 Long-Term Energy Plan (LTEP) indicated that it will not proceed at this time with the construction of two new nuclear reactors at the Darlington site; however, the LTEP also indicated that the Ministry of Energy will work with OPG to maintain the site preparation licence granted by the CNSC. As such, OPG is undertaking activities required to support the EA and existing licence.

On May 14, 2014, OPG received the decision of the Federal Court (Canada) on a judicial review of the issuance of the Power Reactor Site Preparation Licence and a judicial review in relation to the Darlington New Nuclear Project EA. As a result of the decision, the Federal Court nullified the site preparation licence issued by the CNSC. The Federal Court ordered that the EA be returned to the Joint Review Panel (or a duly constituted panel) for additional consideration of three specific matters.

OPG, the Attorney General of Canada, and the CNSC have appealed this decision to the Federal Court of Appeal. A hearing date for the appeal has not yet been set, but is expected in 2015.

## Deep Geologic Repository for Low and Intermediate Level Waste

OPG's deep geologic repository (DGR) will be designed for the long term management of L&ILW produced from the continued operations of OPG owned or operated nuclear generating stations.

The public hearing days for the EA and the site preparation and construction license concluded in September 2014. OPG made several presentations to the Joint Review Panel (JRP) and responded to a number of inquiries from the JRP, which included questions and motions arising from the public's participation. In November 2014, the JRP closed the public record for the EA as it concluded that all the necessary information to complete its mandate had been received. No further comments or information will be accepted by the JRP. The JRP is expected to provide a report and recommendation on the EA to the federal Minister of Environment by May 2015. A decision from the Minister of Environment on the EA is expected within 120 days from the report submission.

OPG has suspended design activities pending receipt of the site preparation and construction licence from the JRP. Upon completion of the detailed design, development of a schedule and budget, consideration of consultation with the Saugeen Ojibway Nations community, and OPG Board of Directors' approval, OPG will proceed with construction. The in-service date of the DGR is expected to be approximately six to seven years from the start of construction.

## Lower Mattagami River Project

In June 2010, construction activities commenced on the Lower Mattagami River project to add one additional generating unit at each of the existing Little Long, Harmon and Kipling generating stations and to replace the existing Smoky Falls GS with a new three-unit station. As of December 31, 2014, the entire complex had been placed inservice, ahead of the project's target completion date of June 2015. The project has increased the capacity of these four stations in northeast Ontario by 438 MW and its total cost is within the approved budget of \$2.6 billion.

In-Service				
Station	Capacity (MW)	In-Service Date		
Little Long GS incremental unit	67	January 2014		
Harmon GS incremental unit	78	June 2014		
Smoky Falls GS Unit 1 <sup>1</sup>	89	September 2014		
Smoky Falls GS Unit 2 <sup>1</sup>	89	October 2014		
Smoky Falls GS Unit 3 <sup>1</sup>	89	December 2014		
Kipling GS incremental unit	78	December 2014		

The capacity and in-service dates for the new generating units are as follows:

<sup>1</sup> The new three-unit station at Smoky Falls replaced the existing 52 MW Smoky Falls station.

Under the partnership agreement, as new units are placed in-service, the Amisk-oo-Skow Finance Corporation, a corporation wholly owned by the Moose Cree First Nation, may acquire up to a 25 percent interest in the value of the assets through its investment in LMLP. During 2014, the Amisk-oo-Skow Finance Corporation made contributions of \$141 million to acquire their equity interest in LMLP. As at December 31, 2014, the Amisk-oo-Skow Finance Corporation had a 25 percent interest in LMLP.

## Atikokan Biomass Conversion

In July 2014, a two-year project to convert the Atikokan GS from coal to biomass fuel was completed, ahead of its original target completion date. The project cost is expected to be within the budget of \$170 million.

The Atikokan GS is currently the largest generating station in North America fuelled by 100 percent biomass. Biomass is a sustainable fuel recognized globally as beneficial to climate change mitigation. The converted station has a capacity of 205 MW and is subject to a 10-year ESA with the IESO until 2024.

## Thunder Bay Advanced Biomass Conversion

In June 2014, OPG and the IESO executed the 5-year Thunder Bay Biomass ESA for the conversion of one unit at the Thunder Bay GS to advanced biomass fuel. OPG completed the conversion of the unit and declared the unit in commercial operation in January 2015. The converted unit has an in-service capacity of approximately 153 MW. The conversion of the unit was completed ahead of schedule and within the approved cost estimate of \$7 million. The converted unit will be able to provide dispatchable, renewable electricity when required to meet electricity demand.

# New Post Creek

During 2014, OPG and the IESO continued negotiations for a power purchase agreement for the proposed 28 MW Peter Sutherland Sr. GS. The station is expected to be constructed through a partnership between OPG and Coral Rapids Power L.P., a wholly owned subsidiary of the Taykwa Tagamou Nation.

# **Financial Sustainability**

As a commercial enterprise, OPG's financial priority is to achieve a consistent level of financial performance that will ensure its long-term financial sustainability and maintain the value of its assets for its Shareholder – the Province of Ontario. Inherent in this priority are three objectives:

- enhance profitability by increasing revenue
- improve efficiency and reduce costs
- ensure a strong financial position that enables OPG to finance its operations and generation development projects.

# Revenue Growth

OPG's revenue strategy focuses on revenue growth, while taking into account the impact on Ontario electricity ratepayers. OPG has multiple sources of revenue, including:

- regulated revenue from the prescribed nuclear and hydroelectric generating facilities
- prior to November 1, 2014, revenue based on electricity spot market prices for production from the 48 hydroelectric facilities prescribed for rate regulation beginning in 2014
- contract revenue from ESAs and cost recovery agreements for the unregulated facilities
- non-generation revenues.

Electricity produced from the prescribed facilities receives regulated prices determined by the OEB. OPG's objectives with respect to its regulated operations are to clearly demonstrate that costs for these operations are prudently incurred and should be fully recovered, and to earn an appropriate return on the regulated assets. OPG's revenues from its prescribed facilities have increased as a result of new regulated prices established by the OEB effective November 1, 2014. While these prices represent an increase over the prices previously in effect, they are significantly lower than those requested by OPG based on its forecast costs, which negatively affects OPG's ability to earn the OEB-prescribed rate of return on the regulated assets.

In December 2014, OPG filed a motion asking the OEB to review and vary the parts of its decision establishing new regulated prices effective November 1, 2014 related to the disallowance of the Niagara Tunnel project expenditures, and the application of the 2013 regulatory tax loss to reduce the 2014/2015 revenue requirement. The hearing on the motion is scheduled for the end of March 2015.

In December 2014, OPG also filed an application with the OEB requesting approval to recover the December 31, 2014 balances in most of the authorized regulatory variance and deferral accounts through new rate riders beginning on July 1, 2015. OPG's proposed recovery periods would allow it to realize additional revenue of approximately \$1.3 billion over the 2015/2016 period. This additional revenue would reflect the collection of balances related to

prior periods and, therefore, while this positively impacts cash, it is not expected to have a significant impact on income. Similarly, in the first quarter of 2013, the OEB established rate riders allowing OPG to recover \$633 million over the 2013/2014 period related to the December 31, 2012 balances in most of the authorized variance and deferral accounts.

OPG is expecting a decision from the Supreme Court of Canada relating to the OEB's appeal of OPG's appeal of the Divisional Court of Ontario's decision regarding the March 2011 OEB ruling that disallowed recovery in regulated prices of a portion of OPG's nuclear compensation costs. The Supreme Court of Canada granted the OEB's Application for Leave to Appeal, and the appeal was heard in December 2014. The court's decision is expected in 2015.

In 2015, OPG plans to apply to the OEB for new regulated prices for production from the regulated facilities, effective in 2016. It is the OEB's expectation that these prices would be determined on the basis of an incentive regulation ratemaking methodology for the hydroelectric operations, and a three to five year forecast cost of service ratemaking approach for the nuclear operations. Incentive regulation generally involves greater de-coupling of regulated prices from a regulated entity's actual costs. Starting in December 2014, OPG held several meetings with stakeholders to discuss the details of these ratemaking methodologies as they apply to OPG's regulated operations.

Greater revenue certainty for virtually all of OPG's previously unregulated production that received electricity spot market prices was achieved in 2014 as a result of the 48 previously unregulated hydroelectric stations beginning to receive regulated prices effective November 1, 2014. The placement in-service throughout 2014 of the new units at the Little Long GS, Harmon GS, Smoky Falls GS, and Kipling GS as part of the Lower Mattagami River project is also contributing to revenue certainty and growth for OPG. The Lower Mattagami River project stations are under a hydroelectric ESA with the IESO, which provides for revenue requirement recovery throughout the term of the agreements.

OPG also earns non-electricity generation revenues through a number of sources, including: isotope and heavy water sales; the lease of the Bruce A and B nuclear stations; joint ventures associated with the PEC and the Brighton Beach gas-fired combined cycle generating stations; trading and other non-hedging activities; real estate rentals; and the provision of technical and engineering services to third parties. The benefit of OPG's net revenues from the lease of the Bruce stations and related agreements, and a portion of isotope and heavy water sales, is credited to ratepayers, as it reduces the regulated prices for the generation of the nuclear facilities owned and operated by OPG. To increase non-generation revenues from unregulated operations, OPG, through its wholly-owned subsidiary, Canadian Nuclear Partners Inc. (CNP), continues to explore opportunities to provide management and technical services to other utilities and power sector organizations.

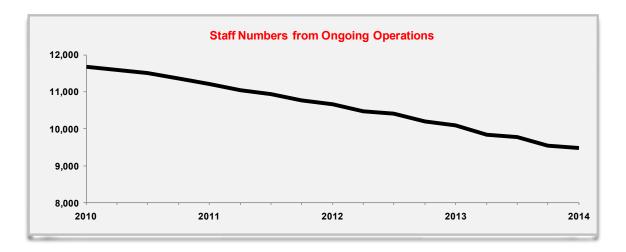
## Improving Efficiency and Reducing Costs

OPG is focused on reducing costs by aggressively pursuing efficiency and productivity improvements. To accomplish this, OPG launched a multi-year Business Transformation initiative in 2011 to create a streamlined company with a sustainable cost structure. As part of this initiative, OPG implemented a centre-led organizational model to more efficiently utilize its resources. Each business unit also launched initiatives to improve efficiencies and reduce costs. In addition, OPG undertook a large-scale initiative, the Enterprise System Consolidation Project (ESCP), to streamline the company's software systems and further improve business processes by implementing a common enterprise software platform. On January 1, 2015, OPG successfully implemented the ESCP which integrated enterprise systems that support plant operations, purchasing, payments, and time reporting.

OPG's cost reduction initiatives are driving sustainable change, while ensuring that there is no adverse impact on the safety, reliability, and environmental sustainability of OPG's operations. As a result of the efforts over the last four years, the principles and objectives of Business Transformation are now embedded in OPG's values, behaviours, and processes. Going forward, OPG will continue to identify opportunities to reduce costs and work more efficiently.

The implementation of a centre-led organizational model had an impact on existing employee roles and reporting relationships. In 2014, teams comprised of management and union representatives completed the placement of all union represented employees to roles in the new organizational structure to reflect the centre-led model.

To date, OPG has realized cumulative savings of approximately \$550 million through headcount reductions of approximately 2,200 from ongoing operations during the January 1, 2011 to December 31, 2014 period. By the end of 2014, OPG surpassed its 2015 headcount reduction target. OPG plans to reduce headcount by approximately 500 more, primarily through attrition, by 2017.



#### Strengthening Financial Position

In addition to its initiatives to increase revenue, achieve efficiencies, and reduce costs, OPG also employs the following four strategies to strengthen its financial position:

- Ensuring sufficient liquidity: OPG's primary sources of liquidity and capital include funds generated from operations, bank financing, credit facilities provided by the OEFC, and capital market financing. Cash flow provided by operating activities increased by \$259 million in 2014. In 2014, OPG renewed and extended its \$1 billion bank credit facility to May 2019. OPG also had access to a \$500 million general corporate credit facility with the OEFC which expired on December 31, 2014. In December 2014, OPG entered into an \$800 million general corporate credit facility agreement with the OEFC in support of its financing requirements for the 2015/2016 period. OPG intends to continue to access the capital markets, where appropriate, to obtain cost effective financing for future generation development projects.
- Maintaining an investment grade credit rating: OPG's current investment grade credit ratings have enabled it to secure financing at cost effective interest rates. In August 2014, Standard & Poor's re-affirmed OPG's long-term credit rating at A- with a negative outlook. In March 2014, DBRS Ltd. re-affirmed the long-term credit rating on OPG's debt at A (low), and the commercial paper rating at R-1 (low). All ratings from DBRS Ltd. have a stable outlook.
- Ensuring that generation development projects are economic and provide for cost recovery and an appropriate return: OPG evaluates generation development opportunities using detailed financial and risk based analysis. Project funds are committed and released in stages based on specific milestones and taking into consideration the nature and risk of the project. For generation development projects that do not form a part of the assets regulated by the OEB, OPG seeks to secure appropriate revenue arrangements prior to project approval. For generation development projects subject to OEB rate regulation, OPG strives to demonstrate to the OEB that its investment plans and expenditures are prudent. In 2014, OPG continued to negotiate ESAs for new development and conversion projects. Updates on these projects are discussed under the heading *Project Excellence* in the section, *Core Business and Strategy*.

• Evaluating financial performance: OPG continuously evaluates its financial performance using key credit rating and financial metrics, including ROE, and FFO Interest Coverage. For further details, refer to the ROE and FFO Interest Coverage disclosure under the heading, *Supplementary Non-GAAP Financial Measures*.

# CAPABILITY TO DELIVER RESULTS

OPG's capability to execute its corporate strategies and deliver results is dependent on the following key areas:

## **Generating Assets' Reliability**

OPG continues to implement initiatives to improve the reliability and predictability of its generating asset portfolio. These initiatives are designed to address specific technology requirements and operational experience, and mitigate risks. In 2014, research, inspection and maintenance activities associated with fuel channels were conducted to ensure OPG's nuclear facilities can safely achieve extended service lives as predicted. Investments in plant equipment and backlog reductions continued to improve overall reliability, and fleet wide initiatives were implemented to address industry wide issues and improve efficiencies.

OPG has increased the productive capacity of its hydroelectric stations and has made significant capital investments to replace aging equipment, upgrade turbine runners, increase station automation, and enhance maintenance practices. Programs are in place to maintain and improve the efficiency and availability of existing hydroelectric stations.

## **Project Planning and Execution**

OPG is pursuing and executing a number of generation development projects and opportunities as described under the section, *Core Business and Strategy*. OPG also continues to plan and execute maintenance and capital improvement projects related to its existing assets. To achieve its strategy of project excellence and successfully deliver projects on budget and on schedule, OPG continues to enhance its ability to plan and execute projects. The project planning and preparation process includes establishing contingency plans to manage potential challenges, creating and maintaining comprehensive risk registers, and tracking progress against clearly established milestones. In addition, project accountability is established at the appropriate level, with oversight by senior management and Board of Directors' committees.

# **Operating Efficiencies**

OPG is continuing to focus on cost reductions and efficiencies. Progress has been achieved through a restructuring of the Company that combined the hydroelectric and thermal operations, restructuring commercial operations to take advantage of market opportunities, and implementing a scalable, centre-led service delivery model for business support functions. The Company has simplified its operational and project work processes to further streamline operations.

## **People and Culture**

OPG has leveraged attrition to achieve its human resource targets by realigning work and streamlining processes. OPG is also focusing on the communication and implementation of the Company's values and expected behaviours from its employees in order to achieve a corporate culture change. OPG continues to focus on improving the capability of its workforce through succession planning, leadership development, and knowledge retention programs. Beginning in 2015, OPG will implement a company-wide high potential development program. This 18-month cross functional development program is designed to identify and develop candidates for future leadership positions while they are still relatively early in their career. OPG expects to develop and acquire talent as needed to continue to drive change and build leadership strength. The Company has an active succession planning program and continues to implement leadership development programs across the organization. In addition, OPG has embarked upon an organization-wide workforce planning effort. The Company has also established monitoring processes to re-assess staffing risks, issues, and opportunities.

Electricity generation involves complex technologies that require highly skilled and trained workers. Many positions at OPG have significant educational prerequisites and rigorous requirements for continuous training and periodic requalification. In addition to maintaining its extensive internal training infrastructure, OPG relies on partnerships with government agencies, other electrical industry partners, and educational institutions to meet the required level of qualification.

As of December 31, 2014, OPG had approximately 9,700 full-time employees and approximately 980 seasonal, casual construction, contract, and non-regular staff. Most of OPG's full-time employees are represented by two unions:

- The PWU This union represents approximately 5,600 OPG employees or approximately 58 percent of OPG's regular workforce. Union membership includes operators, technicians, skilled trades, clerical, and security personnel. The current collective agreement between OPG and the PWU has a three-year term, which expires on March 31, 2015. Negotiations for a new labour agreement with the PWU are currently underway.
- The Society of Energy Professionals This union represents approximately 3,000 OPG employees or approximately 31 percent of OPG's regular workforce. Union membership includes supervisors, professional engineers, scientists, and other professionals. The Company's current collective agreement with The Society was established through an arbitration award issued on April 8, 2013. This agreement has a three-year term, which expires on December 31, 2015. The Society filed a Judicial Review Application in the second quarter of 2013 to the Superior Court of Ontario in the matter of the arbitration award. The case was heard at the Divisional Court of Ontario on October 30, 2014 and a ruling was issued November 27, 2014 dismissing the Society's application. In December 2014, the Society filed a motion for leave to appeal the Divisional Court ruling. The motion has been heard and a decision is expected in the next few months.

In addition to the regular workforce, construction work is performed through 19 craft unions with established bargaining rights on OPG facilities. These bargaining rights are established either through the Electrical Power Systems Construction Association (EPSCA) or directly with OPG. Collective agreements between the Company and its construction unions are negotiated either directly or through EPSCA. A common expiry date for a number of the EPSCA agreements is April 30, 2015 and preparation for the negotiations to renew these agreements is underway.

#### **BUSINESS SEGMENTS**

Effective January 1, 2014, OPG has the following five reportable business segments:

- Regulated Nuclear Generation
- Regulated Nuclear Waste Management
- Regulated Hydroelectric
- Contracted Generation Portfolio
- Services, Trading, and Other Non-Generation.

## Regulated – Nuclear Generation Segment

The Regulated – Nuclear Generation business segment operates in Ontario, generating and selling electricity from the nuclear generating stations owned and operated by OPG. The business segment includes electricity generated by the Pickering GS Darlington GS. This business segment also includes revenue under the terms of a lease arrangement and related agreements with Bruce Power related to the Bruce Nuclear generating stations. This revenue includes lease revenue and revenue from heavy water sales and services such as detritiation. Revenue is also earned from isotope sales and ancillary services. Ancillary revenues are earned through voltage control and reactive support. Revenues under the agreements with Bruce Power and from isotope sales and ancillary services are included by the OEB in the determination of the regulated prices for OPG's nuclear facilities, which has the effect of reducing OPG's nuclear regulated prices.

## Regulated – Nuclear Waste Management Segment

OPG's Regulated – Nuclear Waste Management segment engages in the management of nuclear used fuel and L&ILW, the decommissioning of OPG's nuclear generating stations (including the stations on lease to Bruce Power), the management of the Used Fuel Fund and the Decommissioning Segregated Fund (Decommissioning Fund) (together the Nuclear Funds), and related activities including the inspection and maintenance of the waste storage facilities. Accordingly, accretion expense, which is the increase in the carrying amount of the Nuclear Liabilities due to the passage of time, and earnings from the Nuclear Funds are reported under this segment.

As the nuclear generating stations operate over time, OPG incurs incremental costs (also known as variable costs) related to used nuclear fuel bundles and L&ILW which increase the Nuclear Liabilities. OPG charges these variable costs to current operations in the Regulated – Nuclear Generation segment to reflect the cost of producing energy and earning revenue under the Bruce Power lease arrangement and related agreements. Since variable costs increase the Nuclear Liabilities in the Regulated – Nuclear Waste Management segment, OPG records an intersegment charge between the Regulated – Nuclear Generation and the Regulated – Nuclear Waste Management segments. The impact of the inter-segment charge is eliminated on OPG's consolidated statements of income and balance sheets.

The Regulated – Nuclear Waste Management segment is considered regulated because the costs associated with the Nuclear Liabilities are included by the OEB in the determination of regulated prices for production from OPG's regulated nuclear facilities.

# Regulated – Hydroelectric Segment

OPG's Regulated – Hydroelectric business segment operates in Ontario, generating and selling electricity from most of the Company's hydroelectric generating stations. The business segment includes the results of the Sir Adam Beck 1, 2 and Pump hydroelectric facilities, DeCew Falls 1 and 2, and the R.H. Saunders hydroelectric facilities. This segment also includes the results of the 48 newly regulated hydroelectric stations. The comparative information for these 48 hydroelectric stations, previously reported under the Unregulated – Hydroelectric segment in OPG's 2013 annual MD&A and consolidated financial statements, has been reclassified to conform to this new presentation.

In addition, the business segment includes ancillary revenues and other revenues are earned through offering available generating capacity as operating reserve and through the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services. These ancillary revenues and other revenues are included by the OEB in the determination of the regulated prices for these facilities, which has the effect of reducing OPG's hydroelectric regulated prices.

# **Contracted Generation Portfolio Segment**

The Contracted Generation Portfolio business segment operates in Ontario, generating and selling electricity from the Company's generating stations that are not prescribed for rate regulation. The segment primarily includes generating

facilities that are under an ESA with the IESO or other long-term contracts. Activities of generating stations that are not currently subject to a contract or rate regulation, but are available to generate electricity for sale, if required, are also included in the Contracted Generation Portfolio segment.

Since the Lambton GS and Nanticoke GS were generating electricity up to the end of 2013, the activities related to these stations for the comparative period are reported in the Contracted Generation Portfolio segment. These stations ended coal-fired operations as a result of a Shareholder declaration issued in March 2013 mandating that OPG end the use of coal at these stations by the end of 2013. Therefore, effective January 1, 2014, the activities related to the Lambton GS and Nanticoke GS are reported under the Services, Trading, and Other Non-Generation business segment. The comparative information for the unregulated generating stations, previously reported under the Unregulated – Hydroelectric and Unregulated – Thermal segments in OPG's 2013 annual MD&A and consolidated financial statements, has been reclassified to conform to the new presentation.

The Contracted Generation Portfolio segment also includes OPG's share of equity income from its 50 percent ownership interests in the PEC and Brighton Beach stations. Brighton Beach operates under an energy conversion agreement between Brighton Beach and Shell Energy North America (Canada) Inc. and the PEC station is operated under the terms of an Accelerated Clean Energy Supply contract with the IESO. OPG's share of the in-service generating capacity and generation volume from its interests in the PEC and Brighton Beach stations are also included in this segment.

The business segment also includes ancillary revenues and other revenues, which are earned through offering available generating capacity as operating reserve, and the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services.

#### Services, Trading, and Other Non-Generation Segment

The Services, Trading, and Other Non-Generation segment is a non-generation segment that is not subject to rate regulation. It includes the revenue and expenses related to OPG's trading and other non-hedging activities. As part of these activities, OPG transacts with counterparties in Ontario and neighbouring energy markets in predominantly short-term trading activities of typically one year or less in duration. These activities relate to electricity that is purchased and sold at the Ontario border, financial energy trades, sales of financial risk management products, and sales of energy-related products. In addition, OPG has a wholly owned trading subsidiary that transacts solely in the United States (US) market. All contracts that are not designated as hedges are recorded as assets or liabilities at fair value, with changes in fair value recorded in the revenue of this segment. In addition, this segment includes revenue from real estate rentals and other unregulated service revenues. The above activities were previously reported in the Other category in OPG's 2013 annual MD&A and consolidated financial statements.

Information for the comparative period has been adjusted to reflect the changes to OPG's reportable business segments and is labeled "adjusted".

#### **KEY GENERATION AND FINANCIAL PERFORMANCE INDICATORS**

Key performance indicators that directly pertain to OPG's mandate and corporate strategies are measures of production efficiency, cost effectiveness, environmental performance, and safety performance. OPG evaluates the performance of its generating stations using a number of key indicators. The measures used vary depending on the generating technology.

Effective January 1, 2014, OPG revised the composition of its reportable business segments to reflect changes in its generation portfolio and its internal reporting. After ending coal-fired operations at the Nanticoke GS and the Lambton GS, OPG no longer uses the Thermal Start Guarantee Rate and the Thermal OM&A Expense per MW as indicators of performance. In addition, OPG previously reported Nuclear Production Unit Energy Cost and hydroelectric Equivalent Forced Outage Rate (EFOR). Effective January 1, 2014, OPG has adopted Nuclear Total Generating Cost (TGC) per MWh as a cost performance indicator for its nuclear generating facilities and reports Hydroelectric Availability as the single measure of the reliability of its hydroelectric generating facilities. OPG continues to report the Nuclear Unit Capability Factor as a measure of its nuclear station performance, and Hydroelectric OM&A expense per MWh as a measure of the cost effectiveness of its hydroelectric generating facilities.

#### **Nuclear Unit Capability Factor**

OPG's nuclear stations are baseload facilities. They are not designed for fluctuating production levels to meet peaking demand. The nuclear unit capability factor is a key measure of nuclear station performance. It measures the amount of energy that the unit(s) generated over a period of time, adjusted for externally imposed constraints, such as transmission or demand limitations, as a percentage of the amount of energy that would have been produced over the same period had the unit(s) produced maximum generation. Capability factors are primarily affected by planned and unplanned outages. Capability factors, by industry definition, exclude production losses beyond plant management's control, such as grid-related unavailability.

#### Nuclear Total Generating Cost per Megawatt hour

Nuclear TGC per MWh is used to measure the cost performance of OPG's nuclear generating assets. Nuclear TGC per MWh is defined as the total of fully-allocated OM&A expenses from ongoing nuclear operations, including total pension and OPEB costs, nuclear fuel expense including expenses related to used fuel storage and disposal, and capital project costs for ongoing nuclear operations, divided by net nuclear electricity generation.

#### **Hydroelectric Availability**

OPG's hydroelectric stations operate as baseload, intermediate, and peaking stations. They provide a safe, reliable and low-cost source of renewable energy. Hydroelectric availability is a measure of the reliability of a hydroelectric generating unit. It is represented by the percentage of time the generating unit is capable of providing service, whether or not it is actually generating electricity, compared to the total time for a respective period.

#### Hydroelectric OM&A Expense per MWh

Hydroelectric OM&A expense per MWh is used to measure the cost-effectiveness of OPG's hydroelectric generating stations. It is defined as total hydroelectric OM&A expenses, including allocated centralized support services costs, divided by hydroelectric electricity generation. OM&A expenses exclude expenditures related to past grievances by First Nations.

#### Thermal Equivalent Forced Outage Rate

A measure of the reliability of the thermal generating stations is the proportion of time they are available to produce electricity when required. EFOR is an index of the reliability of the generating unit. It is measured by the ratio of time a generating unit is forced out of service by unplanned events, including any forced deratings, compared to the amount of time the generating unit was available to operate.

## Return on Common Equity

ROE is an indicator of OPG's performance consistent with its objectives to operate on a financially sustainable basis and to maintain the value for the Shareholder. ROE is defined as Net income attributable to the Shareholder divided by average equity attributable to the Shareholder excluding AOCI for the period. The definition of ROE was refined as of January 1, 2014 as a result of the establishment of a non-controlling interest, which reflects equity contributions made by the Amisk-oo-Skow Finance Corporation, a corporation wholly owned by the Moose Cree First Nation, to LMLP. More details are available under the sections, *Highlights – Return on Equity* and *Supplementary Non-GAAP Financial Measures*.

## **Funds from Operations Interest Coverage**

FFO Interest Coverage is an indicator of OPG's ability to meet interest obligations from operating cash flows. FFO Interest Coverage is defined as FFO before interest divided by Adjusted Interest Expense. It is measured over a period of twelve months. More details are available under the sections, *Highlights – Funds from Operations Interest Coverage* and *Supplementary Non-GAAP Financial Measures – FFO Interest Coverage*.

ROE and FFO Interest Coverage are not measurements in accordance with US GAAP. They should not be considered as alternative measures to net income or any other measure of performance under US GAAP. However, OPG believes that these non-GAAP financial measures are effective indicators of its performance and are consistent with the objectives to operate on a financially sustainable basis and to maintain the value for the Shareholder.

# **Other Key Indicators**

In addition to performance and cost-effectiveness indicators, OPG has identified certain environmental and safety metrics. These metrics are discussed under the section, *Core Business and Strategy*.

# DISCUSSION OF OPERATING RESULTS BY BUSINESS SEGMENT

# Regulated – Nuclear Generation Segment

(millions of dollars)	2014	2013
	0 700	0.550
Regulated generation sales	2,709	2,552
Variance accounts	(41)	55
Other	347	282
Total revenue	3,015	2,889
Fuel expense	313	296
Variance and deferral accounts	(55)	(59)
Total fuel expense	258	237
Gross margin	2,757	2,652
Operations, maintenance and administration	1,983	2,022
Depreciation and amortization	529	626
Property taxes	28	29
Income (loss) before other income, interest, income taxes, and extraordinary item	217	(25)
Other income	-	(1)
Income (loss) before interest, income taxes, and extraordinary item	217	(24)

Income before interest, income taxes, and extraordinary item from the segment was \$217 million in 2014, compared to a loss before interest and income taxes of \$24 million in 2013. The increase in earnings of \$241 million was primarily a result of an increase in generation and a reduction in OM&A expenses. Earnings were also positively affected by the new regulated prices, effective November 1, 2014, that were approved by the OEB in its December 2014 order.

Higher electricity generation of 3.4 TWh increased gross margin by \$177 million. The increase in generation was attributable to fewer unplanned outage days at the Darlington GS and Pickering GS compared to 2013. The reduction in OM&A expenses was primarily due to lower outage costs and lower salary costs. The lower salary costs were primarily due to improved business efficiencies reflected in the reduction of staff numbers.

The 2014 generation revenue reflected the impact of a lower rate rider, partially offset by higher base regulated prices during November and December, which decreased gross margin by \$35 million. The rate riders were established by the OEB to collect amounts previously recorded in variance and deferral accounts, net of a refund to ratepayers for a portion of the benefit related to lower depreciation expense for the Pickering GS in 2013 and 2014. The impact of the lower rate rider in 2014 was largely offset by a corresponding decrease in amortization expense related to regulatory balances.

During 2014, OPG also recognized \$44 million in other revenue related to the Bruce Power lease agreement (Bruce Lease) due to a change in the value of the derivative embedded in the Bruce Lease resulting from an increase in the expected future annual arithmetic average HOEP (Average HOEP). The increase in lease revenue was offset by the decrease in the regulatory asset for the Bruce Lease Net Revenues Variance Account. For more details, refer to the discussion under the heading, *Leases, Partnerships and Subsidiaries*.

The Unit Capability Factors for the Darlington GS and Pickering GS and the Nuclear TGC per MWh for 2014 and 2013 were as follows:

	2014	2013
Unit Capability Factor (%)		
Darlington GS	92.1	82.9
Pickering GS	75.3	73.7
Nuclear TGC per MWh (\$/MWh)	51.31	53.93

The higher capability factors at the Darlington GS and Pickering GS for 2014 were attributable to fewer outages during the year. Darlington GS experienced fewer unplanned outages and executed only one major planned outage in 2014 compared to 2013, which contributed to an increase in the capability factor in 2014.

The decrease in Nuclear TGC per MWh during 2014 was primarily due to increased production and lower OM&A expenditures, partially offset by higher capital expenditures.

#### **Regulated – Nuclear Waste Management Segment**

	2014	2013
Revenue	121	113
Operations, maintenance and administration Accretion on nuclear fixed asset removal and nuclear waste management liabilities	129 782	121 742
Earnings on nuclear fixed asset removal and nuclear waste management funds	(714)	(628)
Loss before interest, income taxes, and extraordinary item	(76)	(122)

Loss before interest, income taxes, and extraordinary item for the Regulated – Nuclear Waste Management segment was \$76 million for 2014, compared to \$122 million for 2013. Higher earnings on the Used Fuel Fund contributed to the improved segment earnings in 2014.

An increase in the Ontario Consumer Price Index (CPI) which affects the committed return related to the first 2.23 million used fuel bundles was the primary reason for the higher Used Fuel Fund earnings in 2014. The increased earnings in the segment were partially offset by higher accretion expense. The higher accretion expense

in 2014 reflects the increase in the fixed asset removal and nuclear waste management liabilities in 2014, compared to 2013, due to the increase in the present value of the underlying obligation to reflect the passage of time.

#### Regulated – Hydroelectric Segment

(millions of dollars)	2014	<b>2013</b> <sup>1</sup> (adjusted)
Regulated generation sales <sup>2</sup>	858	747
Spot market sales	408	301
Variance accounts	22	51
Other	129	137
Total revenue	1,417	1,236
Fuel expense	325	325
Variance accounts	18	19
Total fuel expense	343	344
Gross margin	1,074	892
Operations, maintenance and administration	325	298
Depreciation and amortization	167	186
Regulatory disallowance related to the Niagara Tunnel project	77	-
Property taxes	1	(1)
Income before other loss, interest, income taxes, and extraordinary item	504	409
Other loss	2	4
Income before interest, income taxes, and extraordinary item	502	405

<sup>1</sup> The comparative amounts have been adjusted to include the activities of 48 of OPG's hydroelectric generating facilities which were prescribed for rate regulation beginning in 2014.

<sup>2</sup> During 2014 and 2013, the Regulated – Hydroelectric segment generation sales included incentive payments of \$16 million and \$18 million, respectively, related to the OEB-approved hydroelectric incentive mechanism. The mechanism provides a pricing incentive to OPG to shift hydroelectric production from lower market price periods to higher market price periods, reducing the overall costs to ratepayers.

The increase in income before interest, income taxes, and extraordinary item of \$97 million during 2014, compared to 2013, was primarily due to higher generation revenue. The increase in generation revenue was primarily a result of higher electricity spot market prices received during the first quarter of 2014, compared to the same quarter in 2013, for the production from the 48 hydroelectric facilities prescribed for rate regulation beginning in 2014. Prior to the OEB's order establishing regulated prices for these stations effective November 1, 2014, the revenue for generation from these stations was based on the Ontario electricity spot market price. The increase in generation revenue also reflected new regulated prices approved by the OEB for the existing and newly regulated hydroelectric facilities effective November 1, 2014. The impact on generation revenue of the lower rate rider during 2014, compared to 2013, was largely offset by a corresponding decrease in amortization expense related to regulatory balances.

The improvement in income was partially offset by the write-off of costs totaling \$77 million for an OEB disallowance related to the Niagara Tunnel project and higher OM&A expenses. OM&A expenses increased by \$27 million during 2014, compared to 2013, primarily due to an increase in project and work activities in 2014.

The Regulated – Hydroelectric availability and OM&A expense per MWh for 2014 and 2013 were as follows:

	2014	<b>2013</b> (adjusted)
Hydroelectric Availability (%)	91.4	91.3
Hydroelectric OM&A expense per MWh (\$/MWh)	10.2	9.5

The hydroelectric availability during 2014 was consistent with the availability during 2013. The slight increase in hydroelectric OM&A expense per MWh was due to higher OM&A expenses.

(millions of dollars)	2014	<b>2013</b> (adjusted)
Revenue	329	657
Fuel expense	37	127
Gross margin	292	530
Operations, maintenance and administration	175	408
Depreciation and amortization	38	132
Accretion on fixed asset removal liabilities	8	14
Property taxes	(1)	14
Income from investments subject to significant influence	(41)	(35)
Restructuring	<u>8</u>	50
Income (loss) before other income, interest, income taxes, and extraordinary item	105	(53)
Other income	(6)	(4)
Income (loss) before interest, income taxes, and extraordinary item	111	(49)

## **Contracted Generation Portfolio Segment**

For the 2013 comparative period, the Contracted Generation Portfolio segment includes the operating results of the Nanticoke GS and Lambton GS, including generation revenue and expenses and revenue from the Contingency Support Agreement with the OEFC. These stations ended coal-fired generation at the end of 2013 and therefore the activities of these stations, including expenses incurred in 2014 to preserve the option to convert them to natural gas and/or biomass in the future, are being reported in the Services, Trading, and Other Non-Generation segment effective January 1, 2014. Overall, this results in lower gross margin, partially offset by lower OM&A, depreciation and amortization, and restructuring expenses, for the Contracted Generation Portfolio segment in 2014 compared to 2013.

Income before interest, income taxes, and extraordinary item increased by \$160 million during 2014, compared to 2013. In addition to the change in the composition of the segment, discussed above, the increase was primarily due to higher earnings for production from the six new units constructed as part of the Lower Mattagami River project, which were declared in-service in 2014 and began to receive revenue determined under the hydroelectric ESA. In addition, higher generation volume, primarily from the existing assets included in the Lower Mattagami River project, and higher electricity spot market prices for the electricity generation from those assets in the first quarter of 2014 also contributed to the increase in segment income during 2014. The improvement in earnings was partially offset by lower revenue for the Thunder Bay GS as a result of the expiration of the reliability must run contract at the end of 2013.

The hydroelectric availability, hydroelectric OM&A expense per MWh, and the thermal EFOR for the Contracted Generation Portfolio segment for 2014 and 2013 were as follows:

	2014	<b>2013</b> (adjusted)
Hydroelectric Availability (%)	90.2	95.0
Hydroelectric OM&A expense per MWh (\$/MWh)	23.8	36.2
Thermal EFOR (%)	8.9	8.6

The hydroelectric availability decreased by 4.8 percent during 2014, compared to the availability during 2013, primarily due to an unplanned outage at Unit 2 of the Kipling GS. The decrease in hydroelectric OM&A expense per MWh during 2014, compared to 2013, was primarily due to the impact of higher generation volume from the hydroelectric stations included in this segment. The thermal EFOR for 2014 was comparable to 2013.

# Services, Trading, and Other Non-Generation Segment

(millions of dollars)	2014	<b>2013</b> (adjusted)
Davage	407	
Revenue	197	77
Fuel expense	3	-
Gross margin	194	77
Operations, maintenance and administration	119	7
Depreciation and amortization	20	19
Accretion on fixed asset removal liabilities	7	-
Property taxes	4	11
Restructuring	10	-
Income before other loss (income), interest, income taxes, and extraordinary item	34	40
Other loss (income)	1	(2)
Income before interest, income taxes, and extraordinary item	33	42

The inclusion of the results of the Nanticoke GS and the Lambton GS in this segment, as discussed under the section, *Business Segments*, resulted in higher revenue, OM&A expenses, and restructuring expenses during 2014, compared to 2013. The increase in OM&A expenses was largely offset by revenue for termination costs from the Contingency Support Agreement with the OEFC for these stations. The agreement's early termination provision allowed OPG to recover, during 2014, actual costs incurred that could not reasonably be avoided or mitigated.

Income before interest, income taxes, and extraordinary item decreased by \$9 million during 2014 compared to 2013. The lower income was primarily due to higher pension and OPEB expenses and the recognition of restructuring costs as a result of including the results of Nanticoke GS and Lambton GS in this segment in 2014.

The lower income was partially offset by higher interconnected market sales from the unseasonably cold winter during the first quarter of 2014, which resulted in higher trading margin of \$51 million for electricity sold to neighbouring energy markets.

OM&A expenses of the generation business segments include an inter-segment service fee for the use of certain property, plant and equipment (PP&E), and intangible assets held within the Services, Trading and Other Non-Generation segment. The total service fee of \$32 million in 2014 and \$33 million in 2013 is recorded as a reduction to the segment's OM&A expenses.

# Net Interest Expense

Net interest expense for 2014 was \$80 million. This represents a decrease of \$6 million compared to 2013. The decrease was primarily due to amounts capitalized for construction in progress for the Darlington Refurbishment project and as part of various regulatory variance and deferral accounts. This decrease was partially offset by an increase in interest expense related to the Lower Mattagami River project, as the new units were declared in-service during 2014 and interest costs related to the project are no longer being capitalized.

# Income Taxes

OPG follows the liability method of tax accounting for all its business segments. The Company also records an offsetting regulatory asset or liability for the deferred taxes that are expected to be recovered or refunded through future regulated prices charged to customers for generation from OPG's regulated facilities.

Income tax expense for 2014 was \$139 million, compared to income tax expense of \$31 million for 2013. The increase in income tax expense was largely due to the increase in income during 2014.

## LIQUIDITY AND CAPITAL RESOURCES

OPG's primary sources of liquidity and capital are funds generated from operations, bank financing, credit facilities provided by the OEFC, and capital market financing. These sources are used for multiple purposes including: to invest in plants and technologies; to fund obligations such as contributions to the pension fund and the Nuclear Funds; payments under the OPEB plans; and to service and repay long-term debt.

Changes in cash and cash equivalents for 2014 and 2013 are as follows:

(millions of dollars)	2014	2013
Cash and cash equivalents, beginning of period	562	413
Cash flow provided by operating activities Cash flow used in investing activities Cash flow provided by financing activities	1,433 (1,545) 160	1,174 (1,568) 543
Net increase	48	149
Cash and cash equivalents, end of period	610	562

For a discussion regarding cash flow provided by operating activities and FFO Interest Coverage, refer to the details under the heading, *Overview of Results* under the section *Highlights*.

# **Investing Activities**

Electricity generation is a capital-intensive business. It requires continued investment in plants and technologies to improve operating performance, increase generating capacity of existing stations, invest in new generating stations, and to maintain and improve service, reliability, safety and environmental performance.

Cash flow used in investing activities in 2014 was \$1,545 million, compared to \$1,568 million in 2013. The decrease was primarily due to lower expenditures for the Lower Mattagami River project and the Atikokan Biomass Conversion project as a result of units being declared in-service during 2014, as well as lower capital expenditures for the Niagara Tunnel project which was declared in-service in March 2013. The decrease was partly offset by an increase in capital expenditures related to the Darlington Refurbishment and various upgrades at the Darlington and Pickering nuclear generating stations.

OPG's forecast capital expenditures for 2015 are approximately \$1.7 billion. This includes amounts for hydroelectric development, Darlington Refurbishment, and sustaining capital investments.

# **Financing Activities**

OPG maintains a \$1 billion revolving committed bank credit facility, which is divided into two \$500 million multi-year term tranches. In the second quarter of 2014, OPG renewed and extended both tranches to May 2019. As at December 31, 2014, there were no outstanding borrowings under the bank credit facility.

As at December 31, 2014, OPG maintained \$25 million of short-term, uncommitted overdraft facilities and \$390 million of short-term, uncommitted credit facilities, which support the issuance of the Letters of Credit. OPG uses Letters of Credit to support its supplementary pension plans and for other general corporate purposes. As at December 31, 2014, a total of \$336 million of Letters of Credit had been issued under these facilities. This included \$310 million for the supplementary pension plans, \$25 million for general corporate purposes, and \$1 million related to the operation of the PEC.

The Company has an agreement to sell an undivided co-ownership interest in its current and future accounts receivable to an independent trust. In September 2014, the maximum amount of co-ownership interest that can be sold under this agreement was reduced to \$150 million and the expiry date was extended from November 30, 2014 to

November 30, 2016. As at December 31, 2014, there were Letters of Credit outstanding under this agreement of \$150 million (2013 – \$80 million), which were issued in support of OPG's supplementary pension plans.

OPG maintained a credit facility with the OEFC related to the Niagara Tunnel project for an amount up to \$1.6 billion which expired on December 31, 2014, with no new borrowings in 2014. As at December 31, 2014, advances under this facility were \$1,065 million.

The Lower Mattagami Energy Limited Partnership (LME) maintains a \$600 million bank credit facility to support the funding requirements for the Lower Mattagami River project. The facility consists of two \$300 million multi-year term tranches. In the third quarter of 2014, the maturity of the first tranche was extended to August 2019, from August 2018. The second tranche matures in August 2015. As at December 31, 2014, there was no external commercial paper outstanding under this program. In June 2014, LME issued senior notes totalling \$200 million with a maturity date of June 20, 2024. The effective interest rate for these notes was 3.5 percent and the coupon interest rate was 3.4 percent. In 2011, OPG executed a \$700 million credit facility with the OEFC in support of the Lower Mattagami River project. As at December 31, 2014, there were no outstanding borrowings under the OEFC credit facility.

In October 2014, UMH Energy Partnership (UMH) entered into an \$8 million of short-term, uncommitted overdraft facility and \$16 million of irrevocable, standby letters of credit facilities in support of its operations. As at December 31, 2014, a total of \$14 million of Letters of Credit had been issued.

As at December 31, 2014, OPG's long-term debt outstanding was \$5,730 million, including \$503 million due within one year. OPG maintained a \$500 million general corporate credit facility with the OEFC which expired on December 31, 2014. As of December 31, 2014, there were no outstanding borrowings under the credit facility.

In December 2014, OPG entered into an agreement with the OEFC for an \$800 million general corporate credit facility agreement in support of its financing requirements for 2015 and 2016. As at December 31, 2014, there were no amounts outstanding under this facility.

## **Contractual and Commercial Commitments**

OPG's contractual obligations and other significant commercial commitments as at December 31, 2014, are as follows:

(millions of dollars)	2015	2016	2017	2018	2019	Thereafter	Total
Contractual obligations:							
Fuel supply agreements	193	172	154	134	51	109	813
Contributions under the Ontario Nuclear Funds Agreement <sup>1</sup>	143	150	163	193	288	2,418	3,355
Pension contributions to the OPG registered pension plan <sup>2</sup>	364	370	-	-	-	-	734
Long-term debt repayment	503	273	1,103	398	368	3,085	5,730
Interest on long-term debt	261	249	230	174	155	1,986	3,055
Unconditional purchase obligations	97	8	-	-	-	-	105
Operating lease obligations	16	15	15	13	12	65	136
Commitments related to Darlington Refurbishment <sup>3</sup>	150	-	-	-	-	-	150
Operating licence	22	23	23	18	19	-	105
Accounts payable	295	-	-	-	-	-	295
Other	125	19	14	5	60	9	232
	2,169	1,279	1,702	935	953	7,672	14,710
Significant commercial commitments:							
Lower Mattagami River project	95	-	-	-	-	-	95
Total	2,264	1,279	1,702	935	953	7,672	14,805

<sup>1</sup> Contributions under the Ontario Nuclear Funds Agreement (ONFA) are based on the 2012 ONFA Reference Plan contribution schedule approved in 2012.

<sup>2</sup> The pension contributions include ongoing funding requirements and additional funding requirements towards the deficit, in accordance with the actuarial valuation of the OPG registered pension plan as at January 1, 2014. The next actuarial valuation of the OPG registered pension plan as at January 1, 2017. The pension contributions are affected by various factors including market performance, changes in actuarial assumptions, plan experience, changes in the pension regulatory environment, and the timing of funding valuations. Funding requirements after 2017 for the OPG registered pension plan are excluded due to significant variability in the assumptions required to project the timing of future cash flows. The amount of OPG's additional voluntary contribution, if any, is revisited from time to time.

<sup>3</sup> Estimated currently committed costs to close the project, including demobilization of project staff and cancellation of existing contracts and material orders.

## **BALANCE SHEET HIGHLIGHTS**

The following section provides highlights of OPG's audited consolidated financial position using selected balance sheet data:

(millions of dollars)	2014	2013
Property, plant and equipment - net	17,593	16,738
The increase was primarily due to construction in progress additions for the Darlington refurbishment and capital expenditures related to the Lower Mattagami River project. The increase was partially offset by depreciation.		
Nuclear fixed asset removal and nuclear waste management funds (current and non-current portions)	14,379	13,496
The increase was primarily due to earnings on the Nuclear Funds and contributions to the Used Fuel Fund, partially offset by reimbursements of expenditures on nuclear fixed asset removal and nuclear waste management.		
Regulatory assets (current and non-current portions)	7,191	5,400
The increase was primarily due to the recognition of regulatory assets related to deferred income taxes, and unamortized amounts recorded in AOCI related pension and OPEB obligations, pertaining to facilities which were prescribed for rate regulation beginning in 2014 and an increase in pension and OPEB costs resulting from the re-measurement of the pension and OPEB liabilities; and additions to the Pension and OPEB Cost Variance Account.		
Long-term debt (including debt due within one year)	5,730	5,625
The increase was due to the issuance of debt of \$200 million for the Lower Mattagami River project, partially offset by debt repayments.		
Fixed asset removal and nuclear waste management liabilities	17,028	16,257
The increase was primarily a result of accretion expense due to the passage of time, partially offset by expenditures on nuclear fixed asset removal and waste management activities.		
Pension liabilities	3,570	2,741
Other post-employment benefit liabilities	3,050	2,628
Pension and OPEB liabilities increased primarily due to their re-measurement at the end of 2014 reflecting lower discount rates. The increase in the liabilities was partially offset by the favourable performance of the pension fund in 2014.		

# **Off-Balance Sheet Arrangements**

In the normal course of operations, OPG engages in a variety of transactions that, under US GAAP, are either not recorded in the Company's consolidated financial statements or are recorded in the Company's consolidated financial statements using amounts that differ from the full contract amounts. Principal off-balance sheet activities for OPG include guarantees and long-term contracts.

## <u>Guarantees</u>

As part of normal business, OPG and certain of its subsidiaries and joint ventures enter into various agreements to provide financial or performance assurance to third parties. Such agreements include guarantees, standby Letters of Credit and surety bonds. For more details on OPG's guarantees, refer to Note 15 of OPG's audited consolidated financial statements.

# **CRITICAL ACCOUNTING POLICIES AND ESTIMATES**

OPG's significant accounting policies, including the impact of future accounting pronouncements, are outlined in Note 3 of the audited consolidated financial statements. Certain of these policies are recognized as critical accounting policies by virtue of the subjective and complex judgments and estimates required around matters that are inherently uncertain and could result in materially different amounts being reported under different conditions or assumptions. The critical accounting policies and estimates that affect OPG's consolidated financial statements are highlighted below.

# **Rate Regulated Accounting**

The Ontario Energy Board Act, 1998 and Ontario Regulation 53/05 provide that OPG receives regulated prices for electricity generated from the Sir Adam Beck 1, 2 and Pump generating station, DeCew Falls 1 and 2, and R.H. Saunders hydroelectric facilities, and the Pickering and Darlington nuclear facilities. Pursuant to a November 2013 amendment to Ontario Regulation 53/05, 48 of OPG's previously unregulated hydroelectric generating facilities were also prescribed for rate regulation beginning in 2014. OPG's regulated prices for these facilities are determined by the OEB.

The OEB is a self-funding Crown corporation. Its mandate and authority come from the *Ontario Energy Board Act, 1998*, the *Electricity Act, 1998*, and a number of other provincial statutes. The OEB is an independent, quasi-judicial tribunal that reports to the Legislature of the Province through the Minister of Energy. It regulates market participants in Ontario's natural gas and electricity industries. The OEB carries out its regulatory functions through public hearings and other more informal processes such as consultations.

US GAAP recognizes that rate regulation can create economic benefits and obligations that are required by the regulator to be obtained from, or settled with, the ratepayers. When the Company assesses that there is sufficient assurance that incurred costs in respect of the regulated facilities will be recovered in the future, those costs are deferred and reported as a regulatory asset. When the Company is required to refund amounts to ratepayers in the future in respect of the regulated facilities, including amounts related to costs that have not been incurred and for which the OEB has provided recovery through regulated prices, the Company records a regulatory liability.

Certain of the regulatory assets and liabilities recognized by the Company relate to variance and deferral accounts authorized by the OEB, including those authorized pursuant to *Ontario Regulation 53/05*. These accounts typically capture differences between actual costs and revenues and the corresponding forecast amounts approved in the setting of the regulated prices, or record the impact of items not reflected in approved regulated prices. The measurement of these regulatory assets and liabilities is subject to certain estimates and assumptions, including assumptions made in the interpretation of *Ontario Regulation 53/05* and the OEB's decisions. The estimates and assumptions made in the interpretation of the regulation and the OEB's decisions are reviewed as part of the OEB's regulatory process.

Regulatory assets and liabilities for variance and deferral account balances approved by the OEB for inclusion in regulated prices are amortized based on approved recovery or repayment periods. Disallowed balances, including associated interest, are charged to operations in the period that the OEB's decision is issued.

In addition to regulatory assets and liabilities for variance and deferral accounts, OPG recognizes regulatory assets and liabilities for unamortized amounts recorded in AOCI in respect of pension and OPEB obligations, and deferred income taxes, in order to reflect the expected recovery or repayment of these amounts in respect of the regulated operations through future regulated prices charged to customers. There are measurement uncertainties related to these balances due to the assumptions made in the determination of pension and OPEB obligations and deferred income taxes attributed to the regulated facilities.

The regulatory asset for unamortized pension and OPEB amounts recorded in AOCI has reflected the OEB's use, since April 1, 2008, of the accrual basis of accounting for including pension and OPEB amounts in approved regulated prices. This is also the manner in which these costs are recognized in OPG's consolidated financial statements. Therefore, unamortized amounts in respect of OPG's pension and OPEB plans that are recognized in AOCI generally have not been reflected in the regulated prices until they are reclassified from AOCI and recognized as amortization components of the benefit costs for these plans.

In setting the regulated prices effective November 1, 2014, the OEB limited amounts for pension and OPEB allowed in the approved revenue requirements to OPG's cash expenditures on its pension and OPEB plans for the regulated business. It is the Company's position that this decision by the OEB does not constitute a change in the basis of OPG's recovery of pension and OPEB costs. This position is based on the OEB's establishment of the Pension & OPEB Cash Versus Accrual Differential Deferral Account, the OEB's expectation in the November 2014 decision that a transition to a cash basis of recovery for OPG, if required, would be addressed in a future OPG rate proceeding, and the OEB's intention to hold a generic hearing on the regulatory treatment and recovery of pension and OPEB costs. Accordingly, the Company continues to believe that there is sufficient likelihood that unamortized pension and OPEB amounts that have not yet been reclassified from AOCI will be included in future regulated prices as they are recognized in benefit costs. Therefore, the Company has continued to recognize a regulatory asset for these unamortized amounts. If, in a future proceeding, the OEB decides that the recovery basis for pension and OPEB amounts should be changed, OPG may be required to adjust the regulatory assets for unamortized pension and OPEB amounts recorded in AOCI and the Pension & OPEB Cash Versus Accrual Differential Deferral Account.

Further discussion related to OPG's deferred income taxes and pension and OPEB obligations can be found under the headings, *Income Taxes and Investment Tax Credits* and *Pension and Other Post-Employment Benefits*, respectively, in the *Critical Accounting Policies and Estimates* section.

See Notes 3, 5, 8, 9, and 11 of OPG's 2014 audited consolidated financial statements for additional disclosures related to the OEB's decisions, regulatory assets and liabilities, and rate regulated accounting.

#### **Income Taxes and Investment Tax Credits**

OPG is exempt from income tax under the *Income Tax Act* (Canada). However, under the *Electricity Act, 1998*, OPG is required to make payments in lieu of corporate income taxes to the OEFC. These payments are calculated in accordance with the *Income Tax Act* (Canada) and the *Taxation Act, 2007* (Ontario), as modified by the *Electricity Act, 1998* and related regulations. This results in OPG effectively paying taxes similar to what would be imposed under the federal and Ontario tax acts.

OPG's operations are complex and the computation of the provision for income taxes involves interpretation of the various tax statutes and regulations. OPG has taken certain filing positions in calculating the amount of its income tax provision. These filing positions may be challenged on audit and some of them possibly disallowed, resulting in a potential significant change in OPG's tax provision upon reassessment.

OPG follows the liability method of accounting for income taxes. Under the liability method, deferred income tax assets and liabilities are determined based on differences between the accounting and tax bases of assets and liabilities. Deferred amounts are measured using the enacted tax rates and laws that will be in effect when the

differences are expected to reverse. The effect of a change in tax rates on deferred income tax assets and liabilities is included in income in the period the change is enacted.

If management determines that it is more likely than not that some, or all, of a deferred income tax asset will not be realized, a valuation allowance is recorded to report the balance at the amount expected to be realized.

OPG recognizes deferred income taxes associated with its rate regulated operations and records an offsetting regulatory asset or liability for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers.

Tax benefits associated with income tax positions taken, or expected to be taken, in a tax return and investment tax credits are recorded only when the more likely than not recognition threshold is satisfied. Tax benefits and investment tax credits recognized are measured at the largest amount of benefit that is greater than 50 percent likely of being realized upon settlement.

Investment tax credits are recorded as a reduction to income tax expense. OPG classifies interest and penalties associated with unrecognized tax benefits as income tax expense.

The Company has recognized deferred income tax assets of \$6,231 million (2013 – \$5,757 million) as at December 31, 2014 and the Company believes there will be sufficient future taxable income and capital gains that will permit the use of these deductions and carry-forwards.

The Company has recognized deferred income tax liabilities of \$7,059 million (2013 – \$6,336 million) as at December 31, 2014.

#### Property, plant and equipment, Intangible Assets and Depreciation and Amortization

PP&E and intangible assets are recorded at cost. Interest costs incurred during construction and development are capitalized as part of the cost of the asset, based on the interest rates on OPG's long-term debt. Expenditures for replacements of major components are capitalized.

Depreciation and amortization rates for the various classes of assets are based on their estimated service lives. Any asset removal costs that have not been specifically provided for in current or previous periods are charged to OM&A expenses. Repairs and maintenance costs are also expensed when incurred.

PP&E are depreciated on a straight-line basis except for computers and transport and work equipment. These are mostly depreciated on a declining balance basis. Intangible assets, which consist of major application software, are amortized on a straight-line basis.

The accounting estimates related to asset depreciation require significant management judgment to assess the appropriate useful lives of PP&E and intangible assets including consideration of various technological and other factors.

#### **Asset Impairment**

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The review is based on the presence of impairment indicators such as the future economic benefit of the assets and external market conditions. The net carrying amount of assets is considered impaired if it exceeds the sum of the estimated undiscounted cash flows expected to result from the asset's use and eventual disposition. In cases where the sum of the undiscounted expected future cash flows is less than the carrying amount, an impairment loss is recognized. This loss equals the amount by which the carrying amount exceeds the fair value. Fair value is determined using expected discounted cash flows when quoted market prices are not available. The impairment is recognized in income in the period in which it is identified.

Various assumptions and accounting estimates are required to determine whether an impairment loss should be recognized and, if so, the value of such loss. This includes factors such as short-term and long-term forecasts of the future market price of electricity, the demand for and supply of electricity, the in-service dates of new generating stations, inflation, fuel prices, capital expenditures and station useful lives. The amount of the future net cash flow that OPG expects to receive from its fixed assets could differ materially from the net book values recorded in OPG's audited consolidated financial statements.

The carrying value of investments accounted for under the equity method are reviewed for the presence of any indicators of impairment. If an impairment exists and is determined to be other-than-temporary, an impairment charge is recognized. This charge equals the amount by which the carrying value exceeds the investment's fair value.

#### Nuclear Fixed Asset Removal and Nuclear Waste Management Funds

#### **Decommissioning Fund**

The Decommissioning Fund was established to fund the future costs of nuclear fixed asset removal, long-term L&ILW management, and certain costs for used fuel storage incurred after the stations are shut down. Upon termination of the ONFA, the Province has a right to any excess funds in the Decommissioning Fund. When the Decommissioning Fund is overfunded, OPG limits the earnings it recognizes in its consolidated financial statements by recording a payable to the Province, such that the balance of the Decommissioning Fund is equal to the cost estimate of the liability based on the most recently approved ONFA Reference Plan. Under the ONFA, if there is a surplus in the Decommissioning Fund such that the liabilities, as defined by the most recently approved ONFA Reference Plan, are at least 120 percent funded, OPG may direct up to 50 percent of the surplus over 120 percent to be treated as a contribution to the Used Fuel Fund and the OEFC would be entitled to a distribution of an equal amount. In such instances, OPG recognized 50 percent of the excess greater than 120 percent in income. The payable to the Province could be reduced in subsequent periods in the event that the Decommissioning Fund earns less than its target rate of return or in the event that a new ONFA Reference Plan is approved with a higher estimated decommissioning liability. When the Decommissioning Fund is underfunded, the earnings on the Decommissioning Fund reflect actual fund returns based on the market value of the assets.

#### Used Fuel Fund

The Used Fuel Fund was established to fund future costs of long-term nuclear used fuel waste management. Under the ONFA, the Province guarantees OPG's annual return in the Used Fuel Fund at 3.25 percent plus the change in the Ontario CPI for funding related to the first 2.23 million used fuel bundles (committed return). OPG recognizes the committed return on the Used Fuel Fund and includes it in the earnings on the nuclear fixed asset removal and nuclear waste management funds. The difference between the committed return on the Used Fuel Fund and the actual market return determined based on the fair value of the Used Fuel Fund's assets related to the first 2.23 million used fuel bundles is recorded as due to or due from the Province. The amount due to or due from the Province represents the amount OPG would pay to or receive from the Province if the committed return were to be settled as of the consolidated balance sheet date.

As prescribed under the ONFA, OPG's contributions for the fuel bundles in excess of 2.23 million are not subject to the Province's guaranteed rate of return, but rather earn a return based on changes in the market value of the assets of the Used Fuel Fund.

The *Nuclear Safety and Control Act* (Canada) requires OPG to have sufficient funds available to discharge the current nuclear decommissioning and waste management liabilities. As required by the terms of the ONFA, the Province has provided a Provincial Guarantee to the CNSC on behalf of OPG. The Provincial Guarantee provides for any shortfall between the CNSC consolidated financial guarantee requirement and the Nuclear Funds. OPG pays the Province an annual guarantee fee of 0.5 percent of the amount of the Provincial Guarantee provided by the Province.

The current value of the Provincial Guarantee of \$1,551 million is in effect through to the end of 2017. In each of January 2014 and 2015, OPG paid a guarantee fee of \$8 million based on a Provincial Guarantee amount of \$1,551 million.

#### Pension and Other Post-Employment Benefits

The determination of OPG's pension and OPEB costs and obligations is based on accounting policies and assumptions used in calculating such amounts.

#### Accounting Policy

OPG's post-employment benefit programs consist of a contributory defined benefit registered pension plan, a defined benefit supplementary pension plan, and other post retirement benefits (OPRB) including group life insurance and health care benefits, and long-term disability (LTD) benefits. Post-employment benefit programs are also provided by the Nuclear Waste Management Organization (NWMO), which is consolidated into OPG's financial results. Information on the Company's post-employment benefit programs is presented on a consolidated basis.

OPG accrues its obligations under pension and OPEB plans in accordance with US GAAP. The obligations for pension and OPRB are determined using the projected benefit method pro-rated on service. The obligation for LTD benefits is determined using the projected benefit method on a terminal basis. Pension and OPEB obligations are impacted by factors including interest rates, adjustments arising from plan amendments, changes in demographic assumptions, experience gains or losses, salary levels, inflation, and cost escalation. Pension and OPEB costs, and obligations are determined annually by independent actuaries using management's best estimate assumptions.

Pension fund assets include equity securities, corporate and government debt securities, pooled funds, real estate, infrastructure and other investments. These assets are managed by professional investment managers. The pension fund does not invest in equity or debt securities issued by OPG. Pension fund assets are valued using market-related values for purposes of determining the amortization of actuarial gains or losses and the expected return on plan assets. The market-related value recognizes gains and losses on equity assets relative to a six percent assumed real return over a five-year period.

Pension and OPEB costs include current service costs, interest costs on the obligations, the expected return on pension plan assets, adjustments for plan amendments and adjustments for actuarial gains or losses, which result from changes in assumptions and experience gains and losses. Past service costs or credits arising from pension and OPRB plan amendments are amortized on a straight-line basis over the expected average remaining service life to full eligibility of the employees covered by the plan. Past service costs or credits arising from amendments to LTD benefits are immediately recognized as OPEB costs in the period incurred. Due to the long-term nature of pension and OPRB liabilities, the excess of the net cumulative unamortized gain or loss, over 10 percent of the greater of the benefit obligation and the market-related value of the plan assets (corridor), is amortized over the expected average remaining service life of the employees since OPG expects to realize the associated economic benefit over that period. Actuarial gains or losses for LTD benefits are immediately recognized as OPEB costs to realize the associated economic benefit out the the period incurred.

OPG recognizes on its consolidated balance sheets the funded status of its defined benefit plans. The funded status is measured as the difference between the fair value of plan assets and the benefit obligation on a plan-by-plan basis.

Actuarial gains or losses and past service costs or credits that arise during the year that are not recognized immediately as components of benefit costs are recognized as increases or decreases in other comprehensive income (OCI), net of income taxes. These unamortized amounts in AOCI are subsequently reclassified and recognized as components of pension and OPRB costs as discussed above.

OPG records an offsetting regulatory asset or liability for the portion of the adjustments to AOCI that is attributable to the regulated operations in order to reflect the expected recovery or refund of these amounts through future regulated prices charged to customers. For the recoverable or refundable portion attributable to regulated operations, OPG

records a corresponding change in this regulatory asset or liability for the amount of the increases or decreases in OCI and for the reclassification of AOCI amounts into benefit costs during the period.

When the recognition of the transfer of employees and employee-related benefits gives rise to both a curtailment and a settlement, the curtailment is accounted for prior to the settlement. A curtailment is the loss by employees of the right to earn future benefits under the plan. A settlement is the discharge of a plan's liability.

## Accounting Assumptions

Assumptions are significant inputs to actuarial models that measure pension and OPEB obligations and related effects on operations. Two critical assumptions – discount rate and inflation – are important elements in the determination of benefit costs and obligations. In addition, the expected return on plan assets is a critical assumption in the determination of registered pension plan costs. These assumptions, as well as other assumptions involving demographic factors such as retirement age, mortality, and employee turnover, are evaluated periodically by management in consultation with independent actuaries. During the evaluation process, the assumptions are updated to reflect past experience and expectations for the future. Actual results in any given year will often differ from actuarial assumptions because of economic and other factors. In accordance with US GAAP, for pension and OPRB, the impact of these updates and differences on the respective benefit obligations is accumulated and amortized over future periods; for LTD benefits, the impact of these updates and differences is immediately recognized as OPEB costs in the period incurred.

The discount rates, which are representative of the AA corporate bond yields, are used to calculate the present value of the expected future cash flows on the measurement date to determine the projected benefit obligations for the Company's employee benefit plans. A lower discount rate increases the benefit obligations and increases benefit costs. The expected rate of return on plan assets is based on the pension fund's asset allocation, as well as the expected return considering long-term historical risks and returns associated with each asset class within the plan portfolio. A lower expected rate of return on plan assets increases pension cost.

# **Asset Retirement Obligation**

As at December 31, 2014, OPG's asset retirement obligation (ARO) was \$17,028 million (2013 – \$16,257 million). OPG's ARO consists of fixed asset removal and nuclear waste management liabilities. The ARO is comprised of expected costs to be incurred up to and beyond termination of operations and the closure of nuclear and thermal generating plant facilities and other facilities. The liabilities associated with decommissioning the nuclear generating stations and long-term used nuclear fuel management comprise the most significant amounts of the total obligation. Costs will be incurred for activities such as:

- preparation for safe storage
- safe storage
- dismantling
- demolition and disposal of facilities and equipment
- remediation and restoration of sites
- ongoing and long-term management of nuclear used fuel bundles and L&ILW material.

Nuclear station decommissioning consists of preparation and placement of stations into a safe state condition followed by a 30-year safe store period prior to station dismantling and site restoration. Under the terms of the lease agreement with Bruce Power, OPG continues to be responsible for the nuclear fixed asset removal and nuclear waste management liabilities associated with the Bruce Nuclear generating stations. Under the lease agreement, Bruce Power must return the Bruce stations together to OPG in a de-watered and de-fueled state. These de-watering and de-fueling costs are not part of OPG's ARO.

The following costs are recognized as a liability:

- the present value of the costs of decommissioning the nuclear and thermal production facilities and other facilities after the end of their useful lives
- the present value of the fixed cost portion of nuclear waste management programs that are required based on the total volume of waste expected to be generated over the assumed life of the stations
- the present value of the variable cost portion of nuclear waste management programs taking into account waste volumes generated to date.

The significant assumptions underlying operational and technical factors used in the calculation of the accrued liabilities are subject to periodic review. Changes to these assumptions, including changes to assumptions on the timing of the programs, station end-of-life dates, financial indicators or the technology employed may result in significant changes to the value of the accrued liabilities. With programs of this duration and the evolving technology to handle nuclear waste, there is a significant degree of uncertainty surrounding the measurement of the costs for these programs. These costs may increase or decrease over time. The estimates of the Nuclear Liabilities are reviewed on an ongoing basis as part of the overall nuclear waste management program. Changes in the Nuclear Liabilities resulting from changes in assumptions or estimates that impact the amount of the originally estimated undiscounted cash flows are recorded as an adjustment to the liabilities. Any resulting changes in the related asset retirement costs are capitalized as part of the carrying amount of nuclear fixed assets.

For the purposes of calculating OPG's nuclear fixed asset removal and nuclear waste management liabilities, as at December 31, 2014, consistent with the current accounting end-of-life assumptions, nuclear station decommissioning is projected to occur over the next 40 years.

The liability for the nuclear fixed asset removal and nuclear waste management on a present value basis as at December 31, 2014 was \$16,663 million (2013 – \$15,903 million). As at December 31, 2014, the undiscounted cash flows related to expenditures for OPG's nuclear fixed asset removal and nuclear waste management liabilities in 2014 dollars are as follows:

(millions of dollars)	2015	2016	2017	2018	2019	Thereafter	Total
Expenditures for nuclear fixed asset removal and nuclear waste management <sup>1</sup>	363	502	539	485	508	32,282	34,679

<sup>1</sup> Most of the above expenditures are expected to be reimbursed by OPG's Nuclear Funds as established by the ONFA. The contributions required under the ONFA are not included in these undiscounted cash flows but are reflected in the table under the heading, *Contractual and Commercial Commitments*.

OPG sets aside and invests funds held in segregated custodian and trustee accounts specifically for discharging most of its nuclear fixed asset removal and nuclear waste management liabilities. In accordance with the ONFA between OPG and the Province, OPG established a Used Fuel Fund and a Decommissioning Fund. OPG jointly oversees the investment management of the Nuclear Funds with the Province. The assets of the Nuclear Funds are maintained in third party custodian accounts that are segregated from the rest of OPG's assets.

The liability for non-nuclear fixed asset removal was \$365 million as at December 31, 2014 (2013 – \$354 million). This liability primarily represents the estimated costs of decommissioning OPG's thermal generating stations at the end of their service lives. The liability is based on third party cost estimates following an in-depth review of plant sites and an assessment of required clean-up and restoration activities. In 2011, OPG completed a review of the liability for most of its thermal generating stations. For the purpose of measuring the liability, asset removal activities are assumed to take place over the next 15 years. The undiscounted amount of estimated future cash flows associated with the non-nuclear liabilities is approximately \$500 million.

OPG has no legal obligation associated with the decommissioning of its hydroelectric generating facilities and the costs cannot be reasonably estimated because of the long service life of these assets. With either maintenance efforts or rebuilding, the water control structures are assumed to be used for the foreseeable future. Accordingly, OPG has not recognized a liability for the decommissioning of its hydroelectric generating facilities.

## **Environmental Liabilities**

Current operations are subject to regulation with respect to emissions to air, water, and land as well as other environmental matters by federal, provincial, and local authorities. Environmental liabilities are recorded when it is considered likely that a liability has been incurred and the amount of the liability can be reasonably estimated at the date of the financial statements. The cost of obligations associated with current operations is provided for on an ongoing basis. Management believes it has made adequate provision in the consolidated financial statements to meet certain other environmental obligations. As at December 31, 2014, OPG's environmental liabilities were \$15 million, the primary component of which relates to the land remediation program.

## Fair Value Measurements

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly arm's-length transaction between market participants at the measurement date. Fair value measurements are required to reflect the assumptions that market participants would use in pricing an asset or liability based on the best available information. These assumptions include the risks inherent in a particular valuation technique, such as a pricing model, and the risks inherent in the inputs to the model.

Financial assets and liabilities, including exchange traded derivatives and other financial instruments, measured at fair value and for which quoted prices in an active market are available, are determined directly from those quoted market prices.

For financial instruments for which quoted market prices are not directly available, fair values are estimated using forward price curves developed from observable market prices or rates. The estimation of fair value may include the use of valuation techniques or models, based wherever possible on assumptions supported by observable market prices or rates prevailing at the consolidated balance sheet dates. This is the case for over-the-counter derivatives and securities, which include energy commodity derivatives, foreign exchange derivatives, interest rate swap derivatives, and fund investments. Pooled fund investments are valued at the unit values supplied by the pooled fund administrators. The unit values represent the underlying net assets at fair values, determined using closing market prices. Valuation models use general assumptions and market data and therefore do not reflect the specific risks and other factors that would affect a particular instrument's fair value. The methodologies used for calculating the fair value adjustments are reviewed on an ongoing basis to ensure that they remain appropriate. If the valuation technique or model is not based on observable market data, specific valuation techniques are used, primarily based on recent comparable transactions, comparable benchmark information, bid/ask spread of similar transactions, and other relevant factors.

OPG's use of financial instruments exposes the Company to various risks, including credit risk, foreign currency risk and interest rate risk. A discussion of how OPG manages these and other risks is found under the heading, *Risk Management*.

# Variable Interest Entities (VIE)

OPG holds a variable interest in the NWMO, of which it is the primary beneficiary. Accordingly, the applicable amounts in the accounts of the NWMO, after elimination of all significant intercompany transactions, are consolidated. Refer to Note 3 of OPG's 2014 audited consolidated financial statements for further details.

# CHANGES IN ACCOUNTING POLICIES AND ESTIMATES

# Exemptive Relief for Reporting under US GAAP

During 2014, OPG received exemptive relief from the OSC requirements of section 3.2 of National Instrument 52-107 *Acceptable Accounting Policies and Auditing Standards*. The exemption allows OPG to file consolidated financial statements based on US GAAP without becoming a Securities and Exchange Commission registrant, or issuing public debt. The exemption will terminate on the earliest of the following:

- January 1, 2019
- the financial year that commences after OPG ceases to have activities subject to rate regulation
- the effective date prescribed by the International Accounting Standards Board for the mandatory application of a standard within International Financial Reporting Standards (IFRS) specific to entities with rate-regulated activities.

As a result of OPG's 2011 decision to adopt US GAAP, as required by the FAA regulation, OPG's earlier plan to convert to IFRS, effective January 1, 2012, was discontinued. OPG had substantively completed its IFRS conversion project, which included separate diagnostic, development, and implementation phases, when it suspended the project and began the evaluation of converting to US GAAP in the fourth quarter of 2011. If a future transition to IFRS is required, conversion work can effectively be restarted with sufficient lead time to evaluate and conclude on changes that occurred subsequent to the decision to suspend the project.

# Impacts of Regulation of the Newly Regulated Hydroelectric Facilities, and the OEB's 2014 Decision and Order

The OEB's decision on OPG's September 2013 application for new regulated prices for OPG's nuclear and existing regulated hydroelectric generation was issued in November 2014, following a public hearing process. This decision was followed by the OEB's order in December 2014 establishing new regulated prices for these facilities effective November 1, 2014.

The OEB's decision and order also established a regulated price for the generation from the 48 newly regulated hydroelectric facilities. In establishing the regulated price for these facilities effective November 1, 2014, the OEB determined that the price for the generation from these facilities for the period from July 1, 2014 to October 31, 2014 would be based on the Ontario electricity spot market price, which these facilities had continued to receive during this period on an interim basis pursuant to an earlier order of the OEB.

As a result of the rate regulation of these 48 previously unregulated hydroelectric facilities in 2014, OPG recognized regulatory assets related to deferred income taxes, and unamortized amounts recorded in AOCI in respect of pension and OPEB obligations. The increase in the regulatory asset related to deferred income taxes resulted in a net extraordinary gain of \$243 million in the consolidated statement of income for 2014. The increase in regulatory assets related to pension and OPEB obligations resulted in an increase of \$184 million in OCI, net of \$61 million in income taxes.

The OEB's decision and order also approved a \$1,365 million addition to regulated rate base due to the completion and in-service addition of the Niagara Tunnel project in March 2013. The approved rate base amount is lower than the cost of the asset which resulted in a write-off of costs of \$77 million in 2014, including \$1 million of expected project close out costs.

# Pension and Other Post-Employment Benefits

The weighted average discount rate used to determine the projected pension benefit obligations and the projected benefit obligations for OPEB as at December 31, 2014 was 4.0 percent. This represents a decrease, compared to the 4.9 percent discount rate that was used to determine the obligations as at December 31, 2013.

The deficit for the registered pension plans increased from \$2,461 million as at December 31, 2013 to \$3,262 million as at December 31, 2014 largely as a result of the decrease in the discount rates at 2014 year end, partially offset by the favourable return on pension fund assets in 2014.

The projected benefit obligations for OPEB increased from \$2,719 million at December 31, 2013 to \$3,143 million as at December 31, 2014. This increase in the obligation was largely due to the decrease in the discount rates.

As at December 31, 2014, the unamortized net actuarial loss and unamortized past service costs for the pension and OPEB plans totalled \$4,869 million (2013 – \$3,899 million). Details of the unamortized net actuarial loss and unamortized past service costs at December 31, 2014 and 2013 are as follows:

	Registered Pension Plans		Supplementary Pension Plans		Other Post- Employment Benefits	
(millions of dollars)	2014	2013	2014	2013	2014	2013
Net actuarial gain not yet subject to amortization due to use of market-related values	(878)	(886)	-	-	-	-
Net actuarial loss not subject to amortization due to use of the corridor	1,568	1,339	32	29	288	245
Net actuarial loss subject to amortization	3,443	3,043	65	50	350	78
Unamortized net actuarial loss	4,133	3,496	97	79	638	323
Unamortized past service costs	-	-	-	-	1	1

A change in assumptions, holding all other assumptions constant, would increase (decrease) 2014 costs as follows:

(millions of dollars)	Registered Pension Plans <sup>1</sup>	Supplementary Pension Plans <sup>1</sup>	Other Post- Employment Benefits <sup>1</sup>
			201101110
Expected long-term rate of return			
0.25% increase	(25)	n/a	n/a
0.25% decrease	25	n/a	n/a
Discount rate			
0.25% increase	(51)	(1)	(10)
0.25% decrease	54	1	12
Inflation			
0.25% increase	90	1	1
0.25% decrease	(85)	(1)	(1)
Salary increases			
0.25% increase	20	3	1
0.25% decrease	(20)	(3)	(1)
Health care cost trend rate			
1% increase	n/a	n/a	75
1% decrease	n/a	n/a	(37)

n/a – change in assumption not applicable.

<sup>1</sup> Excludes the impact of regulatory variance and deferral accounts.

## **Recent Accounting Pronouncements**

## Revenue from Contracts with Customers

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update No. 2014-09, *Revenue from Contracts with Customers* (ASU 2014-09), which supersedes nearly all existing revenue recognition guidance, including industry-specific guidance under US GAAP. The core principle of ASU 2014-09 is to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration to which an entity expects to be entitled for those goods or services. ASU 2014-09 defines a five step process to achieve this core principle and, in doing so, more judgement and estimates may be required compared to the requirements under existing US GAAP. The standard will be effective for OPG's 2017 fiscal year, including interim periods in 2017. In applying the standard, entities would have the option between two retrospective transition methods: (i) a full retrospective approach reflecting the application of the standard in each prior reporting period with the option to elect certain practical expedients, or (ii) a retrospective approach with the cumulative effect of initially adopting ASU 2014-09 recognized at the date of adoption and additional disclosures. OPG is currently assessing the impact of this new standard on its consolidated financial statements and has not yet determined the method by which it will adopt the standard in 2017.

#### Consolidation

In February 2015, the FASB issued Accounting Standards Update 2015-02, Consolidation (Topic 810): Amendments to the Consolidation Analysis (ASU 2015-02), which incorporates targeted changes to the consolidation guidance for limited partnerships, limited liability corporations and securitization structures. Specifically for OPG, limited partnerships will now be VIEs unless the limited partners hold substantive "kick-out" or participating rights. It is expected that more limited partnerships will therefore be considered VIEs and where OPG is the primary beneficiary; the limited partnerships that are not currently consolidated would be consolidated. The amendments will be effective for OPG's 2016 fiscal year, including interim periods in 2016. OPG is currently assessing the impact of the standard on its consolidated financial statements and has not yet determined the impact of the standard in 2016.

#### **RISK MANAGEMENT**

#### **Overview**

OPG faces various risks that could significantly impact the achievement of its strategic, operational, financial, environmental, and health and safety goals. The aim of risk management is to identify and mitigate these risks, and to preserve the value of the Shareholder's investment in OPG's assets.

#### **Risk Governance Structure**

The Risk Oversight Committee (ROC) of the Board of Directors assists the Board in fulfilling its oversight responsibilities for matters relating to identification and management of the Company's key business risks. An Executive Risk Committee (ERC), which is comprised of the business unit leaders and the Chief Risk Officer (CRO), assists the ROC in fulfilling its governance and oversight responsibilities related to OPG's risk management activities.

#### **Risk Management Activities**

OPG faces a wide array of risks as a result of its business operations. The Enterprise Risk Management (ERM) framework is designed to identify and evaluate risks on the basis of their potential impact on the Company's capacity to achieve specific business plan objectives.

The quarterly risk management reporting activities are coordinated by a centralized ERM group led by the CRO. The activities begin with business units identifying, reviewing, and assessing risks that could prevent achievement of their

business plan objectives. The ERM group reviews, validates, and consolidates this information and prioritizes risks based on their potential to impact OPG's overall business objectives. The ERM group also assesses external developments that may have implications to the corporate risk profile and facilitates the identification and assessment of emerging risks. The ERC then validates the prioritized risks to determine the top risks to the Company.

Senior management sets risk limits for the financing, procurement, and trading activities of the Company. Senior management also ensures that effective risk management policies and processes are in place to ensure compliance with such limits in order to maintain an appropriate balance between risk and return. OPG's ERM process facilitates the monitoring of risk management activities for identified key risks on a regular basis. This allows the ERM group to report significant developments to the ERC and the ROC on a quarterly basis.

For the purpose of disclosure, a number of key risks are presented in five main categories, namely operational, financial, regulatory, enterprise-wide, and environmental. For each category, the key risks are briefly described below.

#### **Operational Risks**

#### **Risks Associated with Existing Generating Operations**

OPG is exposed to variable output from its existing generating stations that could adversely impact its financial performance.

Operational risks are those risks normally inherent in the operation of electricity generating facilities. These risks can lead to interruptions in the operations of generating stations or uncertainty in future production. The operational risks of a station are generally a function of the age of the stations and the technology used.

#### Nuclear Generating Stations

Operating an aging nuclear fleet exposes OPG to unique risks such as unplanned outages, an increase in cost of operations and risks associated with nuclear waste management operations.

Operating nuclear stations exposes OPG to unique risks, such as greater-than-anticipated deterioration of station components and systems, risks associated with the nuclear industry, supply chain (vendor quality), the handling, storage and disposal of nuclear waste, and the risk of nuclear accident. The primary impacts of these risks are additional safety requirements, potentially lower than expected generation and revenues, and higher operating costs.

The uncertainty associated with the electricity volume generated by OPG's Canadian Deuterium Uranium (CANDU) nuclear generating units is primarily driven by the condition of the station components and systems, which are all subject to the effects of aging. Fuel channels are expected to be the most life-limiting component affecting station end-of-life. Another significant factor identified to date includes degradation of primary heat transport pump motors at the Darlington GS. Additionally, there are fuel handling performance challenges at both the Darlington GS and Pickering GS. To respond to these challenges, OPG continues to implement extensive inspection and maintenance programs to monitor performance, identify corrective actions and projects required to operate reliably and within design parameters. One such major inspection and maintenance program is the planned VBO at the Darlington GS in 2015.

Deterioration of station components may progress in an unexpected manner, resulting in the need to increase monitoring, conduct extensive repairs, or undertake additional remedial measures. To maintain a safe operating margin, a nuclear unit could be derated resulting in reduced generation. When an unexpected condition first appears, a specific monitoring program is established. The primary impact of these conditions on OPG is an increase in the long-term cost of operations. The associated mitigation may create additional outage work, thus increasing the number of outages or extending planned outages.

The process of generating electricity by nuclear generating stations produces nuclear waste. As required by the CNSC, OPG is accountable for the management of used fuel and L&ILW and decommissioning of its nuclear stations and waste management facilities, including the stations on lease to Bruce Power. Currently, there are no licensed facilities in Canada for the permanent disposal of nuclear used fuel or L&ILW.

OPG is developing plans for a DGR to address the need for the long-term management of L&ILW. Special interest group opposition to deep geologic disposal of L&ILW may require OPG to respond accordingly in order to satisfy major stakeholders. There is a risk of further delays to the EA approval and/or the issuance of the site preparation and construction license caused by additional regulatory, political, legal and other requirements. Additionally, there is a risk that prolonged on-site L&ILW storage may be opposed. Other factors impacting the residual risk associated with nuclear waste management operations include human performance and changes in regulatory requirements.

The NWMO has developed a process for moving forward with Adaptive Phased Management as the long-term solution for Canada's nuclear fuel waste. In the interim, OPG is storing and managing used fuel at its nuclear generating station sites.

## Pickering Continued Operations

Consistent with the 2013 LTEP, OPG plans to continue the safe and reliable operation of the Pickering GS until 2020, and then place these generating units in a safe storage state for eventual decommissioning. The 2013 LTEP indicates that an earlier shutdown of units at the Pickering GS may be possible depending on the following factors:

- projected electricity demand going forward
- the progress of the fleet refurbishment program
- the timely completion of the Clarington Transformer Station.

Inability to achieve continued operations could result in a reduction of OPG's revenue and lead to the advancement of shutdown and station decommissioning expenditures.

Risk factors for Pickering Continued Operations include the discovery of unexpected conditions, equipment failures, critical components in the plant that are reaching end-of-life and are obsolete, and a requirement for significant plant modifications. To mitigate these risks, OPG continues to undertake a number of activities which include the following:

- work on fuel channel life cycle management
- a regulatory strategy and economic analysis to support optimal reactor end-of-life dates
- modification of the operating and maintenance strategy to support Continued Operations.

In June 2014, the CNSC accepted OPG's assessment supporting continued operations and removed a regulatory hold point on the licence for the Pickering GS. Over the remaining lifespan of the station, risks factors, such as fuel handling system, issues with parts procurement, and a shortage of qualified resources may continue to challenge operational excellence. These risks are being addressed by taking appropriate actions including fuel handling reliability improvements, proactively identifying long lead time for materials, and improving overall planning.

## Darlington Operations

The Darlington generating units, based on original design assumptions, are currently forecast to reach their end-of-life between 2019 and 2020. In July 2014, the CNSC approved the renewal of the Darlington GS operating licence until December 31, 2015. OPG is currently seeking a 13-year licence renewal that covers the life extension activities, including refurbishment, on the four Darlington generating units. The public hearing to consider this long-term renewal of the operating licence is expected to take place in 2015. OPG is managing risks related to the Darlington GS operations by resolving ongoing technical issues related to obsolescence and aging, including fuel channel, fuel handling equipment and primary heat transport pump motors. In preparation for the refurbishment, OPG is required to complete a number of critical projects at the Darlington GS relating to fuel handling, emergency power generator, heavy water storage, and the VBO.

#### Hydroelectric Generating Stations

# OPG's hydroelectric generation is exposed to risks associated with water flows, the age of plant and equipment, and dam safety.

The extent to which OPG can operate its hydroelectric generation facilities depends upon the availability of water. Significant variances in weather, including impacts of climate change, could affect water flows. OPG manages this risk by using production forecasting models that incorporate unit efficiency characteristics, water availability conditions, and outage plans. Inputs to the models are assessed, monitored and adjusted on an ongoing basis. For the existing regulated hydroelectric generation, and effective November 1, 2014, for the 48 newly regulated hydroelectric facilities, the financial impacts of variability in electricity production due to the differences between the water conditions underpinning the hydroelectric regulated prices and actual water conditions are captured in the OEB approved Hydroelectric Water Conditions Variance Account.

OPG's hydroelectric generating stations vary in age and the majority of the hydroelectric generating equipment is over 50 years old. The age of the equipment and civil components creates risks to the reliability of some hydroelectric generating stations. OPG manages these reliability risks by performing inspection and maintenance of critical components and by reviewing mitigation actions. In addition, OPG conducts detailed engineering reviews and station condition assessments. The reviews and assessments are conducted on an ongoing basis and help identify future work required to sustain and, if necessary, upgrade a station.

The hydroelectric facilities operate 229 dams across Ontario and dam safety legislation does not currently exist in the province. In August 2011, the Ministry of Natural Resources (now the MNRF) published a set of technical guidelines following a period of public consultation. These technical guidelines, which are not regulation, represent the government standards for dam safety.

In general, OPG practices in the area of dam safety and public safety around dams exceed the minimum requirements outlined in the MNRF technical guidelines. In addition, OPG is developing a new risk-informed approach on behalf of the MNRF to prioritize the outcomes of dam safety assessments. OPG could eventually incur additional costs for certain dams that it operates in order to comply with any new requirements.

## Thermal Generating Stations

Preserving the option of OPG's Nanticoke and Lambton units to run on alternate fuels will require a cost recovery mechanism.

The Nanticoke GS and the Lambton GS ceased generating electricity in 2013. OPG has placed the generating units in these stations in a reserve status to preserve the option to convert the units to natural gas and/or biomass in the future, should they be required. OPG would be required to incur costs to maintain these units in this state and there is no mechanism currently in place to recover these preservation costs. The decision to continue to incur preservation costs, in the absence of a cost recovery mechanism, will be revisited in the first half of 2015.

OPG's capability to convert some units at the Lambton and Nanticoke generating stations to alternate fuels such as natural gas, biomass, or dual gas-biomass is dependent upon obtaining appropriate cost recovery agreements with the IESO.

## Risks Associated with Major Development Projects

The risks associated with the cost, schedule, and technical aspects of the major development projects could adversely impact OPG's financial performance and its corporate reputation.

OPG is undertaking a number of capital intensive projects with significant investments. There may be an adverse effect on the Company if it is unable to: effectively manage these projects; obtain necessary approvals; raise the necessary funds; or fully recover capital costs in a timely manner. These projects may also have a significant impact

on OPG's borrowing capacity and credit rating. Some projects may be ultimately reassessed as being uneconomic. Major projects include the Darlington Refurbishment, the Lower Mattagami River project, and other hydroelectric and thermal projects, such as the New Post Creek project.

## Darlington Refurbishment

The Darlington generating units, based on original design assumptions, are currently forecast to reach their end-of-life between 2019 and 2020. The refurbishment of the Darlington GS is expected to extend its operating life by approximately 30 years. In the 2014 mandate letter for the Minister of Energy, the Government of Ontario outlined its priorities for the electricity sector including working with OPG to ensure that the refurbishment of the four nuclear units at the Darlington GS is completed efficiently and effectively.

A large proportion of the costs of the Darlington Refurbishment will be paid to contractors and suppliers, including vendors that will engineer, procure, and construct components of the project. There are financial and reputational risk exposures for OPG if actual costs significantly exceed the estimates. The early introduction of corrective actions is expected to reduce this risk. In addition, failure to achieve the objectives of the refurbishment project may result in future forced outages and more complex planned outages, potentially impacting the post-refurbishment performance or useful life of the station. To mitigate this risk, and as part of the project front-end planning process, a component condition assessment has been performed on all critical systems within the station. This assessment has evaluated the current condition of the systems and identified required work to be performed during the refurbishment outages. Key life limiting components such as pressure tubes are included in the base refurbishment scope. It is increasingly important for OPG to demonstrate that it can be an effective executor of large nuclear projects. Ongoing challenges, such as ensuring continuity of skilled leaders within OPG and its vendor partners, as well as the availability of technical resources to support the project through execution will have to be managed. OPG continues to work with its Shareholder to determine an appropriate cost recovery mechanism in connection with the project, while considering the impact to electricity consumers.

## Other Development Projects

Projects that are in the initial development stages are subject to schedule delays or possible cancellation due to unforeseen delays in receiving permits or approvals or establishing sufficient certainty regarding project cost recovery through revenue mechanisms, which may involve various external stakeholders. OPG attempts to mitigate these risks through early involvement and regular communication with applicable government agencies, close consultation with external stakeholders, and ongoing monitoring of contractor performance relative to permits.

These projects could also be faced with increasing costs for equipment and construction that could impact their economic viability. OPG continuously monitors such trends in costs in order to keep abreast of emerging issues. OPG seeks to manage and limit cost increases through contracting strategies, where possible.

# **Financial Risks**

# OPG is exposed to a number of discrete market-related risks that could adversely impact its financial and operating performance.

OPG is exposed to a number of financial risks, many of which arise due to OPG's exposure to volatility in commodity and equity markets, and interest rate fluctuations. Pension and OPEB costs are also impacted by these market and interest rate fluctuations. OPG manages this complex array of risks to reduce the uncertainty or mitigate the potential unfavourable impact on the Company's financial results.

#### Commodity Markets

Changes in the market price of fuels used to produce electricity can adversely impact OPG's earnings and cash flow from operations.

To manage the risk of unpredictable increases in the price of fuels, the Company has fuel hedging programs, which include using fixed price and indexed contracts.

The percentages hedged of OPG's fuel requirements and emission requirements are shown in the following table. These amounts are based on yearly forecasts of generation and supply mix, and as such, are subject to change as these forecasts are updated.

	2015	2016	2017
Estimated fuel requirements hedged <sup>1</sup>	69%	69%	62%
Estimated nitric oxide (NO) emission requirement <sup>2</sup>	100%	100%	100%
Estimated SO <sub>2</sub> emission requirement hedged <sup>2</sup>	100%	100%	100%

<sup>1</sup> Represents the approximate portion of megawatt-hours of expected generation production (and year-end inventory targets) from each type of facility (nuclear and thermal) for which OPG has entered into contractual arrangements or obligations in order to secure the price of fuel. Excess fuel inventories in a given year are attributed to the next year for the purpose of measuring hedge ratios.

<sup>2</sup> Represents the approximate portion of megawatt-hours of expected thermal production for which OPG has purchased, been allocated or granted emission allowances and Emission Reduction Credits to meet OPG's obligations under *Ontario Regulation* 397/01.

#### Financial Markets

The market value of investments held by OPG's Nuclear Funds and registered pension plan could be significantly affected by changes in various market factors such as equity prices, interest rates, inflation, and commodity prices.

## Nuclear Funds Market Risk

The Nuclear Funds contain investment allocations to certain asset classes including fixed income securities, domestic and international equity securities, pooled funds, infrastructure, and Canadian real estate. These funds are managed to achieve the target rate of return specified in the ONFA to fund the expenditures associated with the long term management of used fuel and L&ILW, the storage of L&ILW and used fuel after station shutdown, and the eventual decommissioning of OPG's nuclear stations and waste management facilities. The rates of return earned on these segregated funds are subject to various factors including the current and future financial markets conditions, which are inherently uncertain.

For the Used Fuel Fund, the Province guarantees the annual rate of return at 3.25 percent plus the change in the Ontario CPI for the first 2.23 million fuel bundles. A change in the value of the fund, as a result of changes in capital markets related to the first 2.23 million bundles, does not impact OPG's earnings. Unlike contributions subject to the Province's rate of return guarantee, OPG assumes the market risk for investment of funds set aside for incremental bundles in excess of 2.23 million.

The performance of the Nuclear Funds related to stations leased to Bruce Power is subject to the Bruce Lease Net Revenues Variance Account established by the OEB. The variance account partially mitigates market risk related to the Nuclear Funds as it captures the differences between actual and forecast earnings from the Nuclear Funds related to the nuclear generating stations leased to Bruce Power. Forecast earnings are those approved by the OEB in setting regulated nuclear prices.

Residual risk to OPG's financial results continues to exist due to volatility in the financial and commodity markets, especially risks that affect the Nuclear Funds.

## Post-Employment Benefit Obligations Risk

OPG's post-employment benefit obligations include pension, group life insurance, health care, and LTD benefits. OPG's post-employment benefit obligations and costs, and OPG's pension contributions could be materially affected in the future by numerous factors, including: changes in actuarial assumptions such as changes to discount rates; future investment returns; experience gains and losses; the funded status of the pension plans; changes in benefits; changes in the regulatory environment including potential changes to the *Pension Benefits Act* (Ontario); divestitures; changes in OPG's operations; and the measurement uncertainty incorporated into the actuarial valuation process.

The OPG registered pension plan, which covers most employees and retirees, is a contributory defined benefit plan that is indexed to inflation. Contributions to the OPG registered pension plan are determined by actuarial valuations, which are filed with the appropriate regulatory authorities at least every three years. The most recent actuarial valuation of the OPG registered pension plan covering the 3-year period to 2016 was completed as of January 1, 2014. Based on the actuarial valuation, OPG's funding requirements towards the deficit in the registered pension plan have increased from 2013. There is a risk that future actuarial valuations will increase OPG's funding requirements due to market and economic-related risks. A significant decline in the financial markets could trigger an immediate requirement to update the actuarial valuation based on declines in the funded status. OPG will continue to assess the requirements for contributions to the registered pension plan. The next actuarial valuation of the OPG registered plan must have an actuarial valuation date no later than January 1, 2017. OPG's OPEB obligations are not funded and the associated employee benefits are paid from cash flow provided by operating activities.

#### Trading

#### OPG's financial performance can be affected by its trading activities.

OPG's trading operations are closely monitored and total exposures are measured and reported to senior management on a daily basis. One of the metrics used to measure the financial risk of this trading activity is Value at Risk (VaR). VaR is defined as a probabilistic maximum potential future loss expressed in monetary terms for a portfolio based on normal market conditions over a set period of time. During 2014, the VaR utilization ranged between nil and \$4.2 million compared to nil and \$1 million for 2013.

#### <u>Credit</u>

Deterioration in counterparty credit and non-performance by suppliers and contractors can adversely impact OPG's earnings and cash flows from operations.

The Company's credit risk exposure is a function of its electricity sales, trading and hedging activities, treasury activities including investing, and commercial transactions with various suppliers of goods and services. OPG's credit risk exposure relating to electricity sales is considered low as the majority of sales are through the IESO-administered spot market. The IESO oversees the credit worthiness of all market participants.

Other major components of credit risk exposure include those associated with vendors that are contracted to provide services or products. OPG manages its exposure to various suppliers or counterparties by evaluating their financial condition and ensuring that appropriate collateral or other forms of security are held by OPG.

The following table summarizes OPG's credit exposure to all counterparties from electricity transactions and trading December 31, 2014:

			Potential Exposure for Largest Counterparties		
Credit Rating <sup>1</sup>	Number of Counterparties <sup>2</sup>	Potential Exposure <sup>3</sup> (million of dollars)	Number of Counterparties	Counterparty Exposure (million of dollars)	
Investment grade	20	25	5	22	
Below investment grade	4	2	-	-	
IESO <sup>4</sup>	1	390	1	390	
Total	25	417	6	412	

<sup>1</sup> Credit ratings are based on OPG's own analysis, taking into consideration external rating agency analysis where available, as well as recognizing explicit credit support provided through parental guarantees, Letters of Credit or other forms of security.

<sup>2</sup> OPG's counterparties are defined on the basis of individual master agreements.

<sup>3</sup> Potential exposure is OPG's statistical assessment of maximum exposure over the life of each transaction at a 95 percent confidence interval.

<sup>4</sup> Credit exposure to the IESO peaked at \$646 million during 2014. The credit exposure and associated receivable vary each month based on electricity sales. The monthly receivable from the IESO is typically paid to OPG in the subsequent month as per the IESO payment schedule.

#### Liquidity

#### Rising liquidity requirements can impact OPG's capital investment projects.

OPG operates in a capital intensive business. Significant financial resources are required to fund capital improvement projects. In addition, the Company has other significant disbursement requirements including investments in new generating capacity, funding obligations under the ONFA, pension contributions, payments towards OPEB and other benefit plans, and debt maturities with the OEFC. OPG must ensure it has the financial capacity and sufficient access to cost-effective financing sources to fund its capital requirements. A discussion of corporate liquidity is included under the heading, *Liquidity and Capital Resources*.

#### Nuclear Waste Management and Decommissioning Obligations and Nuclear Funds

# The cost estimates of nuclear waste management obligations are based on assumptions that evolve over time and could impact OPG's contributions to the Nuclear Funds to cover these costs.

As required by the CNSC, OPG is responsible for the management of used nuclear fuel and L&ILW, and the eventual decommissioning of its nuclear stations and waste management facilities, including the stations on lease to Bruce Power. OPG is required by various rules and regulations to provide cost estimates associated with its nuclear waste management and decommissioning obligations. The cost estimates are based on numerous underlying assumptions that are inherently uncertain. The assumptions include station end-of-life dates, waste volumes, waste packaging systems, and waste disposal methods. Increased cost estimates for the nuclear waste and decommissioning obligation, or a change in OPG's decommissioning strategy could increase OPG's contributions to the Nuclear Funds. To address the inherent uncertainty, OPG undertakes to review the underlying assumptions and baseline cost estimates at least once every five years. Certain underlying assumptions, such as station end-of-life dates, are reviewed annually, with resulting changes assessed for their impact to the liability. Changing business decisions, such as premature unit closures and refurbishment decisions, are reviewed as they occur, with the existing baseline cost information used to estimate the impacts to the nuclear liability balance. Should changing circumstances be assessed as material or significant, an early re-assessment of baseline costs could be performed before the five-year period is completed. OPG is currently reviewing its nuclear waste management and decommissioning obligations. Any changes to the underlying assumptions and updated lifecycle cost estimates are expected to be developed and submitted to the Province for review and approval in 2016 as part of the next ONFA reference plan update.

OPG's contributions to the Nuclear Funds are determined by approved ONFA reference plans, which are required to be updated at least every five years. The changes in contribution levels are determined based on changes in the values of the Nuclear Funds as well as associated nuclear waste management and decommissioning obligations. As a result, a decrease in the value of the Nuclear Funds could increase OPG's required contributions under the ONFA.

## **Regulatory and Legislative Risks**

OPG is subject to extensive federal and provincial legislation and regulations that have an impact on OPG's operations and financial position.

OPG is subject to regulation by various entities including the OEB and the CNSC. The risks that arise from being a regulated entity include: the potential inability to receive full recovery of capital and operating costs; reductions in earnings; and increases in operating costs. Where possible, these unfavourable impacts are mitigated by maintaining close contact with regulators and other authoritative bodies to ensure early identification and discussion of issues.

## Rate Regulation

Significant uncertainties remain regarding the outcome of rate proceedings, which determine the regulated prices, including rate riders, for OPG's rate regulated operations.

The prices for electricity generated from the prescribed facilities are determined by the OEB using forecast information. There is an inherent risk that the prices established by an economic regulator may not provide for recovery of all actual costs incurred by the regulated operations, or may not allow the regulated operations to earn an appropriate rate of return.

In September 2013, OPG filed a cost of service application for new regulated prices. The OEB's November 2014 decision and December 2014 order resulted in a reduction to OPG's rate application request for the 2014/2015 period of approximately \$1 billion. Approximately \$600 million of the reduction relates to the difference between OPG's actual pension and OPEB costs for the regulated business determined on an accrual basis and the corresponding actual cash expenditures for these plans. The OEB also determined that, effective November 1, 2014, the differences between OPG's pension and OPEB costs for the regulated business on an accrual basis and the corresponding cash expenditures are to be recorded in the Pension & OPEB Cash Versus Accrual Differential Deferral Account. In December 2014, OPG filed a motion asking the OEB to review and vary the parts of its November 2014 decision related to the disallowance of the Niagara Tunnel expenditures, and the application of the 2013 regulatory tax loss to reduce the 2014/2015 revenue requirement. The hearing on the motion has been scheduled for the end of March 2015.

In December 2014, OPG filed an application requesting approval for the disposition of the majority of December 31, 2014 balances in its authorized deferral and variance accounts. OPG is seeking to recover approximately \$1.3 billion over the 18-month period from July 2015 to December 2016. There is a level of inherent uncertainty regarding the outcome of this proceeding.

For further details on the pension and OPEB cost recovery methodology and OPG's deferral and variance accounts application, refer to the disclosure under the heading, *Recent Developments*.

#### Legislative Risks

OPG is subject to extensive federal and provincial legislation and regulations that have an impact on OPG's operations and financial position.

OPG's core business and strategy may be impacted by changes in federal and provincial legislation. To mitigate legislative risks, OPG continues to monitor and actively engage with the provincial and federal governments in order to determine if future legislation will impact the Company.

#### Nuclear Regulatory Requirements

# An aging nuclear fleet or changes in technical codes, regulations or laws may increase the risk of additional nuclear regulatory requirements.

The uncertainty associated with nuclear regulatory requirements is primarily driven by plant aging, changes to technical codes, and challenges raised by the public at regulatory hearings. Addressing these requirements could add to the cost of operations, and in some instances, may result in a reduction or elimination of the productive capacity of a station, or in an earlier than planned replacement of a station component. Additionally, the operations of nuclear stations are often directly impacted by circumstances or events that occur at other nuclear stations globally. These circumstances or events may lead to CNSC regulatory changes with a significant impact on the cost and future operation of OPG's nuclear fleet.

In January 2014, the federal government introduced Bill C-22 which contains a new *Nuclear Liability and Compensation Act* (NLCA). The bill has passed in the House of Commons and is expected to receive Royal Assent in 2015. The legislation of the NLCA will increase OPG's nuclear liability limit from \$75 million to an initial \$650 million, with successive annual increases to \$750 million, \$850 million, and to \$1 billion. OPG is assessing the impact of the increased liability limit on the insurance limits and premiums available to Canadian nuclear operators.

## Enterprise-Wide Risks

OPG's business prospects could be adversely affected by various enterprise-wide risks such as electricity demand and supply, human resources, health and safety, and corporate reputation. Significant risks that could have a potential enterprise-wide impact on OPG's business, reputation, financial condition, operating results and prospects are discussed below.

# Ontario Electricity Market

# Ontario electricity market conditions could impact OPG's revenue and operations.

OPG's generation and market share is impacted by many external factors including: the entrance of new participants into the Ontario market; the competitive actions of market participants; Ontario electricity demand; regulated electricity prices; changes in the regulatory environment; and wholesale electricity prices in the interconnected markets.

SBG has, and will continue to be, an issue when electricity supply exceeds demand. For OPG, SBG can cause hydroelectric spill, reductions in generation from nuclear facilities, and add to wear and tear of station equipment due to increased dispatch. To manage SBG conditions, the IESO may require OPG to reduce hydroelectric generation and spill water. Curtailment of OPG nuclear production is also possible. The Hydroelectric Surplus Baseload Generation Variance Account authorized by the OEB helps mitigate the financial impact of hydroelectric spill due to SBG conditions for the existing regulated hydroelectric facilities and, as of November 1, 2014, for the 48 newly regulated hydroelectric facilities. SBG is not expected to affect OPG's nuclear production, and there currently is no similar variance account for the nuclear facilities.

The structure of the Ontario electricity market is subject to regulation and market rules, changes to which may affect OPG's revenue. The Shareholder, the IESO, the OEB, or another regulatory body may change or institute regulations or rules which can impact OPG's capability to generate revenue or ability to recover appropriate costs.

## People and Culture

OPG's financial position could be affected if skilled human resources are not available or aligned with its operations.

The development of new leaders and retention of staff in critical roles across OPG is a key factor to OPG's success. Another success factor is related to the effective transfer of knowledge from those in critical positions throughout OPG to future leaders. The risk associated with the alignment and/or availability of skilled and experienced resources continues to exist for OPG in specific areas, including leadership and project management positions. To mitigate this risk, OPG continues to focus on succession planning, leadership development and knowledge retention programs to improve the capability of its workforce. In particular, OPG has introduced an initiative in 2014 to develop employees to help ensure that OPG has leaders with the appropriate skill sets and the culture needed to achieve its business goals, in the present and in the future.

There is also a risk of a mismatch between attrition levels and the resource requirements to meet OPG's future demands. In addition, OPG's continuation of the streamlining process from the Business Transformation initiative is expected to result in the reduction of over 2,600 employees from ongoing operations for the period January 1, 2011 to December 31, 2017. To mitigate the risk impact, OPG has embarked upon an organization-wide workforce planning effort and has established ongoing monitoring processes to re-assess risks, issues and opportunities related to staffing on a regular basis. OPG expects to meet the human resource needs of the business by leveraging attrition through continuing to realign work and streamline processes.

As of December 31, 2014, approximately 90 percent of OPG's regular labour force was represented by a union. OPG's collective agreement with the PWU expires on March 31, 2015 and negotiations commenced in early 2015. In addition to the regular workforce, construction work is performed through 19 craft unions with established bargaining rights on OPG facilities. A majority of these collective agreements will expire on April 30, 2015 and preparation for the negotiations to renew these agreements is underway. In the event of a labour disruption by the PWU or any of the craft unions, OPG could face financial and reputational impacts. OPG has contingency plans in place to minimize the impact. The collective agreement between OPG and The Society expires on December 31, 2015 and negotiations are expected to commence in late 2015. The parties do not have the right to strike or lock-out. If the parties are unable to reach an agreement, the terms of the new collective agreement would be decided through interest mediation/arbitration.

In 2012, legislation associated with the Ontario Provincial budget included measures that affect OPG, such as public sector pension reform, and compensation restraints for executives until Ontario ceases to have a budget deficit. These changes adversely affect OPG's ability to retain and attract qualified employees, including those at the executive level, and may ultimately affect OPG's operations.

## Health and Safety

OPG's operations involve inherent occupational safety risks and hazards. OPG's safety management and risk control program is designed to effectively manage safety risks in high risk areas.

OPG's operations involve inherent occupational safety risks and hazards that could impact the achievement of its health and safety goals. The Company is committed to achieving its goal of zero injuries and continuous improvement through maintenance of a formal safety management system at the corporate level which is integrated at the site levels. This system serves to focus OPG on proactively managing safety risks and hazard exposures to employees and contractors.

## Corporate Reputation

OPG is exposed to reputational risk associated with changes in the opinion of various stakeholders regarding its public profile. OPG undertakes various assurance and risk management activities to manage risks to its corporate reputation.

As a provider of a large portion of Ontario's electricity requirements, maintaining a positive corporate reputation is critical for OPG. OPG focuses on building and maintaining its reputation through many practices, including appropriate and transparent governance practices, effective and transparent communication with stakeholders, and corporate citizenship initiatives across the province. In addition, OPG undertakes continuous improvement initiatives

in various assurance and risk management activities. Issue management and response plans are developed to address specific reputational considerations as they arise.

#### Transmission and Interconnection Systems

OPG could face transmission constraints, which could impact its operations and ability to supply electricity to the Ontario electricity markets.

The condition of Ontario's transmission and interconnection systems could impact OPG's revenue and operations. This is because the Company depends on the capacity and reliability of the Ontario transmission system which connects generators to the Ontario grid and ultimately with customers. In Ontario, the capacity of such transmission systems is limited under certain conditions and the OEB's approval is required for system expansion.

#### Ownership by the Province

OPG's commitment to maximize the return on the Shareholder's investment in OPG's assets may compete with the obligation of the Shareholder to respond to a broad range of matters.

The Province owns all of OPG's issued and outstanding common shares. Accordingly, the Province determines the composition of the OPG's Board of Directors and can directly influence major decisions including those related to project development, timing and strategy of the applications for regulated prices, asset divestitures, financing, and capital structure. OPG could be subject to Shareholder directions that require OPG to undertake activities that result in increased expenditures, or that reduce revenues or earnings, relative to the business activities or strategies that would have otherwise been undertaken. In addition, OPG's corporate interests and the wider interests of the Province may compete as a result of the obligation of the Province to respond to a broad range of matters affecting OPG's business environment.

#### Information Technology

# OPG's ability to operate effectively is in part dependent on effectively managing its Information Technology (IT) requirements. IT system failures may have an adverse impact on OPG.

OPG's ability to operate effectively is in part dependent upon developing or subcontracting and managing a complex IT systems infrastructure. Failure to meet IT requirements, effectively deal with cyber security threats, and manage system changes and conversions could result in future system failures, or an inability to align IT systems to support the business. In addition, OPG could be exposed to operational risks, reputational damage and/or financial losses in the event of IT security breaches. To mitigate these risks, OPG closely monitors its IT systems as well as changes in its operating environment, and is proactively implementing appropriate safeguards against IT-related risks. A standing Cyber Security Working Group regularly reviews cyber security programs and initiatives and shares information among business groups in OPG. In December 2014, a comprehensive OPG-wide Integrated Cyber Security Program was initiated to further enhance OPG's cyber security posture across the enterprise and to better align security practices with industry best practices and standards.

## Suppliers

# Non-performance by strategic suppliers or an inability to diversify the supplier base could adversely impact the financial results and reputation of OPG.

OPG's ability to operate effectively is in part dependent upon access to equipment, materials, and service suppliers. Loss of key equipment, materials, and service suppliers, particularly for the nuclear business, could affect OPG's ability to operate effectively. OPG mitigates this risk to the extent possible through effective contract negotiations, contract terms, vendor monitoring, and diversification of its supplier base. In December 2014, an additional vendor was added to be able to supply engineering and construction services, and provide OPG with additional flexibility to respond to the risk of non-performance of the existing vendors.

#### Interconnected Electricity Markets

#### OPG is one of many market participants that trades competitively in the interconnected markets.

OPG competes in interconnected electricity markets while taking into account many external factors, including: the cost to transmit electricity to these markets; the price of electricity in these markets; the competitive actions of other generators and power marketers; new trade limitations; and costs to comply with environmental standards imposed in these markets. OPG's trading subsidiary, OPG Energy Trading, holds a Federal Energy Regulatory Commission licence.

## Leases, Partnerships and Subsidiaries

## OPG's financial performance could be affected if the risks associated with its leases and partnerships materialize.

OPG has leased its Bruce nuclear generating stations to Bruce Power and is a party to a number of partnerships related to the ownership and operation of other generating stations.

Under the Bruce Lease, lease revenue is reduced in each calendar year where the Average HOEP falls below \$30/MWh. The conditional reduction to revenue in the future, embedded in the terms of the Bruce Lease, is treated as a derivative. Derivatives are measured at fair value and changes in fair value are recognized in the consolidated statements of income.

For 2014, the annual Average HOEP was higher than \$30/MWh, which resulted in no reduction in lease revenue. In addition, as a result of an expected increase in future annual Average HOEP, the fair value of the derivative liability decreased by \$44 million during 2014. The derivative liability was \$302 million at December 31, 2014, compared to \$346 million at December 31, 2013. The expected changes in future annual Average HOEP is an annual exposure which will continue until the Bruce units that are subject to this mechanism are no longer in operation, specific units are refurbished, or when the lease agreement is amended. This exposure is mitigated as part of the OEB regulatory process, since revenue from the lease of the Bruce generating stations is included in the determination of nuclear regulated prices and is subject to the Bruce Lease Net Revenues Variance Account.

OPG operated, jointly controlled, and leased facilities are subject to numerous operational, commercial, financial, regulatory, and environmental risk factors.

## Business Continuity and Emergency Management

Natural, technological, or human-caused hazards may impact OPG's business continuity.

OPG is exposed to potential or actual incidents or developments resulting from natural, technological, or humancaused hazards; significant events against which it is not fully insured or indemnified; or to a party that fails to meet its indemnification obligations.

OPG's Business Continuity program provides a framework to build resilience into critical business processes by facilitating development of risk response plans and business continuity exercises. OPG's Emergency Management program ensures that the corporation can manage an emergency in a timely and effective manner. OPG's plans and various implementation procedures identify immediate response actions that will be taken to protect the health and safety of employees, the public, and to limit the impact of the crisis on site security, production capability, and the environment. The program elements are designed to meet legal and regulatory requirements.

#### First Nations and Métis Communities

OPG is exposed to risks associated with its relationships with First Nations and Métis communities. The quality of OPG's relationships and the outcome of negotiations with First Nations and Métis communities may impact OPG's project and financial performance, as well as its corporate reputation.

OPG may be subject to claims by First Nations and Métis communities. These claims stem from projects and generation development related to the operations of OPG and historic operations of OPG's predecessor company, Ontario Hydro, that may have impacted title and rights of First Nations and Métis communities.

OPG has a First Nations and Métis Relations Policy, which sets out its commitment to build and maintain positive relationships with the First Nations and Métis communities. OPG has been successful in resolving some past grievances. However, the outcome of the ongoing and future negotiations depends on a number of factors, including legislation and regulations, and precedents created by court rulings, which are subject to change over time.

# **Environmental Risks**

OPG may be subject to orders or charges if it is not in compliance with applicable environmental laws. Changes in environmental regulatory requirements can result in existing operations being in a state of non-compliance, a potential inability to comply, potential liabilities, and costs for OPG.

Changes to environmental laws could create compliance risks and result in potential liabilities that may be addressed by the installation of control technologies, development of new processes, allowances or offsets, or by constraining electricity production. Further, some of OPG's activities have the potential to impair natural habitat, damage aquatic or terrestrial plant and wildlife, or cause contamination to land or water that may require remediation. In addition, a failure to comply with applicable environmental laws may result in enforcement actions, including the potential for orders or charges.

Potential regulatory changes being managed as risks by the Company include electricity production constraints and flow management requirements to protect fish and fish habitat, expanded fish passage requirements, and lower drinking and ground water tritium concentration standards. These changes could impact plant operations and increase costs. OPG continues to monitor and address risks associated with changes to environmental laws and regulatory requirements. There is also a risk that OPG may incur costs to meet heritage conservation program requirements under the *Ontario Heritage Act*.

#### **RELATED PARTY TRANSACTIONS**

Given that the Province owns all of the shares of OPG, related parties include the Province and successor entities of Ontario Hydro, including Hydro One Inc. (Hydro One), the IESO, and the OEFC, and jointly controlled entities. The transactions between OPG and related parties are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties.

		2014	2	2013
(millions of dollars)	Revenue	Expenses	Revenue	Expenses
Hudro Ono				
Hydro One	23		15	
Electricity sales	23	- 13	15	-
Services	1	13	-	14
Province of Ontario				
Decommissioning Fund excess funding	-	476	· ·	560
Used Fuel Fund rate of return guarantee	-	439	-	755
Gross revenue charges	-	123		124
ONFA guarantee fee	-	8		8
Pension benefits guarantee fee	-	2	-	1
OEFC				
Gross revenue charges		209		208
Interest expense on long-term notes		187		187
Income taxes, net of investment tax credits	-	136		28
	83	150	360	20
Contingency support agreement	03	-	300	-
Capital tax	-	-	-	1
ESO				
Electricity related revenue	4,305	75	4,015	62
	4,412	1,668	4,390	1,948

These transactions for the years ended December 31 are summarized below:

The receivable and payable balances, as at December 31, between OPG and its related parties are summarized below:

(millions of dollars)	2014	2013
Receivables from related parties		
Hydro One	1	2
IESO	468	331
OEFC	10	67
PEC	3	2
Accounts payable and accrued charges		
Hydro One	8	3
OEFC	63	65
Province of Ontario	3	2

## INTERNAL CONTROLS OVER FINANCIAL REPORTING AND DISCLOSURE CONTROLS

Management, including the President and Chief Executive Officer (President and CEO) and the Chief Financial Officer, are responsible for maintaining Disclosure Controls and Procedures (DC&P) and Internal Controls over Financial Reporting (ICOFR). DC&P is designed to provide reasonable assurance that all relevant information is gathered and reported to senior management, including the President and CEO and the Chief Financial Officer, on a timely basis so that appropriate decisions can be made regarding public disclosure. ICOFR is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the financial statements in accordance with US GAAP.

An evaluation of the effectiveness of design and operation of OPG's DC&P and ICOFR was conducted as of December 31, 2014. Management, including the President and CEO and the Chief Financial Officer, concluded that, as of December 31, 2014, OPG's DC&P and ICOFR (as defined in National Instrument 52-109 – *Certification of Disclosure in Issuers' Annual and Interim Filings, of the Canadian Securities Administrators*) were effective.

There were no material changes in OPG's ICOFR during the year ended 2014 that have materially affected or are reasonably likely to materially affect OPG's ICOFR.

Effective January 1, 2015, OPG completed the ESCP implementation, which had no significant impact on OPG's ICOFR at December 31, 2014. The ESCP integrated enterprise systems that support plant operations, purchasing, payments, and time reporting to simplify use, increase efficiencies, and streamline business processes across the organization. As a result of the ESCP, certain processes supporting OPG's ICOFR have changed since the beginning of 2015. Internal controls will be tested for design and operating effectiveness as part of the 2015 CEO and CFO certification process.

## FOURTH QUARTER

#### **Discussion of Results**

	Three Months Ended December 31	
(millions of dollars) (unaudited)	2014	2013
Pequilated generation cales	1,051	801
Regulated generation sales Spot market sales	13	87
Variance accounts	53	37
Other	201	249
Total Revenue	1,318	1,174
Fuel expense	175	174
Variance and deferral accounts	2	(9)
Total fuel expense	177	167
Gross margin	1,141	1,007
Operations, maintenance and administration	684	720
Depreciation and amortization	208	236
Accretion on fixed asset removal and nuclear waste management liabilities	211	189
Earnings on nuclear fixed asset removal and nuclear waste management funds	(176)	(166)
Regulatory disallowance related to the Niagara Tunnel project	`77	-
Income from investments subject to significant influence	(9)	(7)
Property taxes	10	10
Restructuring	3	2
Income before other income, interest, income taxes, and extraordinary item	133	23
Other income	(5)	-
Income before interest, income taxes, and extraordinary item	138	23
Net interest expense	42	23
Income before income taxes and extraordinary item	96	-
Income tax expense (recovery)	6	(4)
Income before extraordinary item	90	4
Net income	90	4
Net income attributable to the Shareholder	86	4
Net income attributable to non-controlling interest	4	-

Net income attributable to the Shareholder for the fourth quarter was \$86 million, compared to \$4 for the same quarter in 2013. The following summarizes the significant factors which caused the variance in net income:

Significant factors that increased income before interest, income taxes, and extraordinary item:

- Higher gross margin of \$101 million for the Regulated Nuclear Generation segment as a result of higher electricity generation of 2.0 TWh
- Higher gross margin of \$79 million primarily as a result of the new regulated prices approved by the OEB, effective November 1, 2014, for OPG's nuclear and hydroelectric generation, including the 48 new regulated hydroelectric stations
- Lower salary costs of \$14 million due to improved business efficiencies reflected in lower staff numbers.

Significant factors that reduced income before interest, income taxes, and extraordinary item:

- Write-off of \$77 million as a result of a regulatory disallowance by the OEB related to the Niagara Tunnel project
- Higher accretion expense of \$22 million which reflects the increase in fixed asset removal and nuclear waste management liabilities in 2014, compared to 2013, due to the change in the present value of the underlying obligation to reflect the passage of time.

#### Average Revenue and Average Sales Prices

The average revenue was as follows:

	Three Months Ended December 31	
(¢/kWh)	2014	<b>2013</b> (adjusted)
OPG Average Revenue Non-OPG Average Revenue	5.8 11.3	5.6 9.8

The increase in the average sales prices for OPG's regulated segments during the fourth quarter of 2014 was a result of the OEB's approval of new regulated prices, effective November 1, 2014. The average sales price for the Regulated – Nuclear Generation segment during the fourth quarter of 2014 was 6.0 ¢/kWh compared to 5.7 ¢/kWh during the same quarter in 2013. The average sales price for the Regulated – Hydroelectric segment during the fourth quarter of 2014 was 3.9 ¢/kWh compared to 3.4 ¢/kWh during the same quarter in 2013.

#### **Electricity Generation**

OPG's electricity generation for the three months was as follows:

	Three Months Ended December 31	
<u>(</u> TWh)	2014	<b>2013</b> (adjusted)
Regulated – Nuclear Generation Regulated – Hydroelectric	12.7	10.7
Existing regulated hydroelectric generating stations	4.6	4.8
Hydroelectric generating stations prescribed for rate regulation beginning in 2014	3.0	3.1
Contracted Generation Portfolio <sup>1</sup>	0.6	0.8
Total OPG electricity generation	20.9	19.4
Total electricity generation by all other generators in Ontario	18.5	19.7

<sup>1</sup> Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

The increase in electricity generation of 1.5 TWh during the fourth quarter of 2014 was primarily due to higher electricity generation from the Regulated – Nuclear Generation segment primarily as a result of fewer outage days at the Darlington GS. The increase in nuclear generation was partially offset by lower hydroelectric generation as a result of SBG conditions which unfavourably affected the electricity generation by OPG's regulated hydroelectric generations. The net income impact of the SBG conditions on OPG's existing regulated hydroelectric stations and, beginning November 1, 2014, on the newly regulated hydroelectric stations was offset by a regulatory variance account.

Ontario's primary demand was 34.5 TWh during the fourth quarter of 2014. This was down from 35.6 TWh during the fourth quarter of 2013 due to changes in economic conditions.

## Liquidity and Capital Resources

Cash flow provided by operating activities during the three months ended December 31, 2014 was \$440 million, compared to \$191 million for the same period in 2013. The increase in cash flow was primarily due to higher cash receipts from generation revenue during the fourth quarter of 2014.

Cash flow used in investing activities during the three months ended December 31, 2014 was \$463 million, compared to \$400 million during the same period in 2013. The increase was mainly due to capital expenditures related to various upgrades at the Darlington and Pickering nuclear generating stations and the Darlington Refurbishment project. The increase is partially offset by lower capital expenditures for the Lower Mattagami River project and the Atikokan Biomass Conversion compared to the fourth quarter of 2013.

Cash flow used in financing activities during the three months ended December 31, 2014 was \$4 million, compared to cash flow provided of \$20 million for the same period in 2013. Cash flow provided by financing activities was lower than in the fourth quarter of the prior year due to lower net borrowings through commercial paper.

#### **QUARTERLY FINANCIAL HIGHLIGHTS**

The following tables set out selected annual financial information for the last three years and financial information for each of the eight most recently completed quarters. This information is derived from OPG's unaudited interim consolidated financial statements and the audited consolidated financial statements. This financial information has been prepared in accordance with US GAAP.

#### **Annual Financial Information**

(millions of dollars)	2014	2013	2012
Revenue	4,963	4,863	4,732
Income before extraordinary			
item	568	135	367
Net income attributable to the			
Shareholder	804	135	367
Income before extraordinary			
item per common share	\$2.19	\$0.53	\$1.43
Net income per common	<b>AA A A</b>	<b>\$</b> 0.50	<b>.</b>
share (dollars)	\$3.14	\$0.53	\$1.43
Total assets	41,653	38,091	37,601
Total long-term liabilities	30,491	28,652	28.789
Common shares	00,401	20,002	20,700
outstanding (millions)	256.3	256.3	256.3

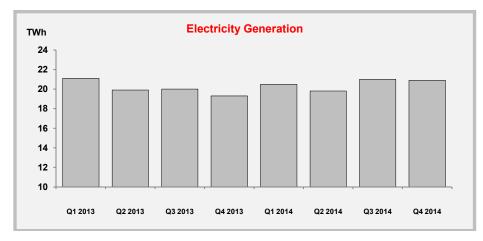
## **Quarterly Financial Information**

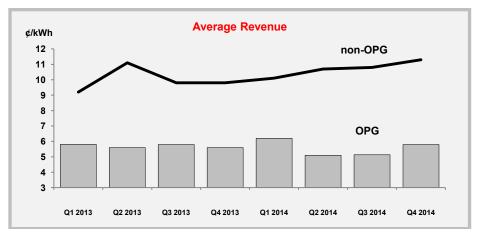
(millions of dollars)		201	4 Quarters End	led	
(unaudited)	December 31	September 30	June 30	March 31	Total
Revenue Income before extraordinary	1,318	1,160	1,098	1,387	4,963
item attributable to the Shareholder Income before extraordinary	86	118	115	242	561
item attributable to non- controlling interest	4	1	1	1	7
Income before extraordinary item	90	119	116	243	568
Net income attributable to the Shareholder Net income attributable to	86	361	115	242	804
non-controlling interest	4	1	1	1	7
Net income	90	362	116	243	811
Per share, attributable to the Shareholder (dollars) Income before extraordinary					
item Net income	\$0.34 \$0.34	\$0.46 \$1.41	\$0.45 \$0.45	\$0.94 \$0.94	\$2.19 \$3.14

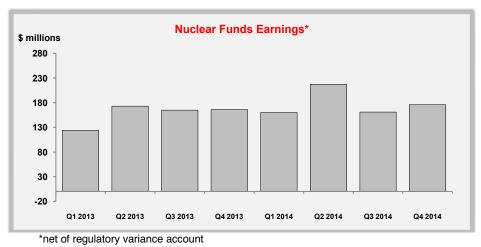
(millions of dollars)	2013 Quarters Ended				
(unaudited)	December 31	September 30	June 30	March 31	Total
Revenue Net income attributable to the	1,174	1,244	1,190	1,255	4,863
Shareholder	4	30	73	28	135
Net income per common share (dollars)	\$0.02	\$0.12	\$0.28	\$0.11	\$0.53

## Trends

OPG's quarterly results are affected by changes in demand primarily resulting from variations in seasonal weather conditions. Historically, OPG's revenues are higher in the first quarter of a fiscal year as a result of winter heating demands, and in the third quarter due to air conditioning and cooling demands. OPG's financial results are also affected by the earnings on the Nuclear Funds.







Additional items which affected net income (loss) in certain quarters above are described below:

- Increase in outage and maintenance activities during the first and third quarter of 2013 resulted in higher nuclear OM&A expenses and lower net income for those periods
- Restructuring expenses of \$46 million recognized during the third quarter of 2013, primarily related to the Shareholder declaration mandating that OPG cease coal-fired generation at the Lambton GS and the Nanticoke GS by December 31, 2013
- Revenue and net income was lower in the fourth quarter of 2013 due to outage and maintenance activities which resulted in lower generation
- Regulated hydroelectric revenue increased in the first half of 2014 by \$163 million, compared to the same period in 2013, as a result of unseasonably cold weather during the first quarter of 2014. Trading revenue during the same period also increased by \$40 million due to favourable changes in weather patterns and gas prices.
- In-service of new units under the Lower Mattagami River projects throughout 2014 increased the quarterly revenue and income
- Extraordinary gain of \$243 million was recognized during the third quarter of 2014 reflected the recognition of additional regulatory assets in respect of the 48 newly regulated hydroelectric facilities
- a write-off of \$77 million during the fourth quarter of 2014 related to a regulatory disallowance related to the Niagara tunnel project.

Additional information about OPG, including its audited consolidated financial statements and notes thereto can be found on SEDAR at <u>www.sedar.com</u>.

#### SUPPLEMENTARY NON-GAAP FINANCIAL MEASURES

In addition to providing net income in accordance with US GAAP, certain non-GAAP financial measures are also presented in OPG's MD&A and audited consolidated financial statements. These non-GAAP measures do not have any standardized meaning prescribed by US GAAP and, therefore, may not be comparable to similar measures presented by other issuers. OPG utilizes these measures to make operating decisions and assess performance. Readers of the MD&A, audited consolidated financial statements and the notes thereto utilize these measures in assessing the Company's financial performance from ongoing operations. The Company believes that these indicators are important since they provide additional information about OPG's performance, facilitate comparison of results over different periods, and present a measure consistent with the corporate strategy to operate on a financially sustainable basis. These non-GAAP financial measures have not been presented as an alternative to net income in accordance with US GAAP, but as an indicator of operating performance.

The definitions of the non-GAAP financial measures are as follows:

(1) **ROE** is defined as net income attributable to the Shareholder divided by average equity attributable to the Shareholder excluding AOCI, for the period. ROE is measured over a 12-month period. The definition of ROE was refined in 2014 as a result of the non-controlling interest established, which reflects equity contributions made by the Amisk-oo-Skow Finance Corporation, a corporation wholly owned by the Moose Cree First Nation to the LMLP.

(millions of dollars – except where noted)	2014	2013
ROE		
Net income attributable to the Shareholder	804	135
Divided by: Average equity attributable to the Shareholder, excluding AOCI	9,420	8,951
ROE (percent)	8.5	1.5
(millions of dollars – except where noted)	2014	2013
millions of dollars – except where noted)	2014	2013
	2014	2013
	2014 804	<b>2013</b> 135
ROE		
ROE Net income attributable to the Shareholder Less: Extraordinary gain	804	
	804 243	135

(2) **FFO Interest Coverage** is defined as FFO before interest divided by Adjusted Interest Expense. FFO before interest is defined as cash flow provided by operating activities adjusted for interest paid, interest capitalized to fixed and intangible assets, and changes to non-cash working capital balances for the period. Adjusted Interest Expense includes net interest expense plus interest income, interest capitalized to fixed and intangible assets, interest applied to regulatory assets and liabilities, and interest on pension and OPEB projected benefit obligations less expected return on plan assets for the period.

FFO Interest Coverage is measured over a 12-month period ended December 31 and is calculated as follows:

(millions of dollars - except where noted)	2014	2013
FFO before interest		
Cash flow provided by operating activities	1,433	1,174
Add: Interest paid	273	255
Less: Interest capitalized to fixed and intangible assets	(135)	(127)
Add: Changes to non-cash working capital balances	(212)	(239)
FFO before interest	1,359	1,063
Adjusted interest expense		
Net interest expense	80	86
Add: Interest income	10	10
Add: Interest capitalized to fixed and intangible assets	135	127
Add: Interest related to regulatory assets and liabilities	75	66
Add: Interest on pension and OPEB projected benefit obligations	179	92
less expected return on pension plan assets		
Adjusted Interset Evenence	470	001
Adjusted Interest Expense	479	381
FFO Interest Coverage (times)	2.8	2.8

(3)  ${\bf Gross\ margin}$  is defined as revenue less fuel expense.

(4) Earnings are defined as net income.

#### CORPORATE GOVERNANCE

National Instrument 58-101, *Disclosure of Corporate Governance Practices*, has been implemented by Canadian securities regulatory authorities to provide greater transparency for the marketplace regarding issuers' corporate governance practices. OPG's corporate governance practices align with National Instrument 58-101 Disclosure of Corporate Governance Practices and National Policy 58-201 Corporate Governance Guidelines. In addition, OPG has reviewed its governance practices against the principles discussed in the 2014 Report on Building High Performance Boards by the Canadian Coalition for Good Governance and OPG compares favourably to those principles that apply to OPG. Information with respect to OPG's Board of Directors is as follows:

#### **Board of Directors**

OPG's Board of Directors is made up of 12 individuals with capability in managing large businesses, managing and operating nuclear stations, managing capital intensive companies, overseeing regulatory, government and public relations, human resources management, financial, legal and corporate governance expertise, knowledge of First Nations, and stakeholder management. The Board exercises its independent supervision over management as follows: the majority of members of the Board of Directors are independent of the Company; meetings of the Board of Directors are held at least five times a year; a formal Charter for the Board of Directors, and for each Board Committee has been adopted and are reviewed annually; the Board and each Board Committee is chaired by an independent Director; and, a portion of each Board and Committee meeting is reserved for Directors to meet without management present.

OPG has a written position description for the Chief Executive Officer (CEO). This position is accountable to the Board of Directors for: ensuring a culture of integrity and ethical conduct; increasing Shareholder value; defining and executing a strategy, including a sustainable business model that will service the long-term power generation needs of the Province; and, providing a standard of leadership that will achieve operational excellence with respect to matters of stakeholder relationships, financial performance, reliability, health, safety, and environmental management and regulatory compliance. In addition, the Board delineates the President and CEO role and responsibilities through the By-laws, the Board Charter, the Board policies and the corporate and CEO annual goals and objectives. The Board sets and monitors performance against annual CEO and OPG targets and objectives.

#### Director Independence

On an annual basis, the Governance and Nominating Committee reviews the disclosures made by Directors in the annual Director Questionnaire and reviews each disclosed affiliation's relationship with OPG in order to determine whether the Director is (or remains) independent. The Governance and Nominating Committee reports on its review to the Board of Directors.

Based on the meaning of Independence in Section 1.4 of National Instrument 52-110 *Audit Committees* (NI 52-110) and a review of the applicable factual circumstances against this standard, the Board's Governance and Nominating Committee has determined that all Directors listed are independent, except for Tom Mitchell, who is considered to have a material relationship with OPG by virtue of his position as President and CEO of OPG.

The OPG Board has a Board of Directors Conflict of Interest Policy and Procedure that governs the disclosure and mitigation of Director conflicts or potential conflicts of interest and has adopted an annual process of written disclosure by Directors in order to:

- (i) identify potential conflicts of interest for the purposes of complying with the Board of Directors Conflict of Interest Policy and the *Business Corporations Act* (Ontario) (OBCA);
- (ii) validate their independence and financial literacy for the purposes of complying with securities regulations related to Boards and Audit Committees; and
- (iii) satisfy other disclosures and filings.

To further minimize potential conflicts of interest, the Board of Directors has a policy on interlocking directorships. The Board's policy on interlocking directorships states that no more than two OPG Directors may sit on a Board of another reporting issuer at the same time. Directors must confirm that they are in compliance with OPG's policy on interlocking directorships when disclosing to the Board Chair appointments to other Boards.

#### Strategic Planning

OPG's mandate is to reliably and cost-effectively produce electricity from its diversified portfolio of generating assets, while operating in a safe, open, and environmentally responsible manner. OPG's goal is to be Ontario's low-cost electricity generator of choice with a focus on three corporate strategies: operational excellence, project excellence, and financial sustainability.

OPG's Board holds an annual strategy session and devotes a significant portion of each regular Board meeting to strategic discussion. Management is responsible for developing the strategy and presenting it to the Board for discussion.

In 2014, the Board received reports on key strategic issues, risks, competitive developments, and corporate opportunities facing the company. Management ensures that the key strategic elements are incorporated into OPG's business plan, which is reviewed and approved by the Board annually. The Board also receives briefings periodically from external advisors on broad energy industry developments and/or special strategic matters.

#### Overseeing the Management of Risk

OPG's Board oversees OPG's approach of identifying, reporting, and mitigating the risks that could significantly impact OPG's capacity to achieve its long-term strategic objectives, as well as specific business plan objectives. To fulfill its risk oversight responsibilities, the Board has established a Corporate Risk Management Policy and a Risk Oversight Committee of the Board, comprised of independent Directors. The Committee's mandate includes oversight of the Enterprise Risk Management Framework that Management uses to manage OPG's risk profile and assists the Board in understanding how the risks may affect the company and how they are being addressed by Management. The Risk Oversight Committee receives quarterly reports from OPG's Chief Risk Officer on enterprise-wide risks, as well as reports on strategic, transactional, and operational risks facing OPG's hydroelectric, thermal, information technology, finance, and corporate operations. In addition, the Chief Risk Officer provides these quarterly reports to the Nuclear Oversight Committee and the Audit and Finance Committee.

Through the Compensation and Human Resources Committee, the Board also monitors the risks associated with the executive compensation program to preclude decision-makers from taking excessive risk in order to achieve incentives under the compensation plans. The Chief Risk Officer and the Senior Vice President, People & Culture jointly review the executive compensation framework on an annual basis to identify any potential for unintended risk-taking. The Chief Risk Officer and the Senior Vice President, People & Culture provide an annual joint report to the Compensation and Human Resources Committee of the Board.

#### Directors

The following tables set forth the name, municipality of residence, position with the Corporation and principal occupation of each of the Directors of the Corporation as of March 13, 2015:



#### Bernard Lord

Age: 49 Moncton, New Brunswick, Canada

Bernard Lord was appointed Board Chair for Ontario Power Generation on April 1, 2014. Mr. Lord is President and CEO of the Canadian Wireless Telecommunication Association and the Chairman of the Mobile Giving Foundation Canada. He serves as a corporate director for Médavie Blue Cross, Clean Air Power and Ontario Power Generation. He also serves on the North American Advisory Board of Alexander Proudfoot.

Bernard Lord earned a bachelor's degree with a major in economics as well as a bachelor's degree in common law from l'Université de Moncton. He also received honorary doctorate degrees from University of New Brunswick, l'Université de Moncton and Saint Thomas University. He was admitted to the New Brunswick Bar in 1993 and was appointed as Queen's Counsel in 2011.

In 1999, Bernard Lord became one of Canada's youngest Premiers at the age of 33. His majority government was reelected in 2003 and he served as Premier of New Brunswick until October 2006. He was elected four times as a Member of the New Brunswick Legislative Assembly.

His government introduced several new initiatives to support the development of natural resources while also protecting the environment, including a new energy policy that lead to the restructuring of NB Power and the refurbishment of the Point Lepreau Nuclear generating station.

During his terms as Premier, New Brunswick saw the lowest unemployment rate in 30 years, tax cuts each and every year combined with balanced budgets and debt reduction. His government made record investments in health care and education while strengthening local democracy and modernising the Official Languages Act.

Board/Committee Membership:	2014 Atten	dance:
Board (November 2013)	11 of 12	92%
Audit & Finance Committee (December 2013 – March 31, 2014)	0 of 1	0%
Risk Oversight Committee (December 2013 – March 31, 2014)	0 of 1	0%
Ad Hoc Committee (since April 2014)	6 of 6	100%
Executive Talent Committee (since April 2014)	4 of 4	100%
The Board Chair is not a member of any standing Committee. The Board Chair attends all other	23 of 23	100%
Committee meetings.		

Principal Occupation: President and CEO of Canadian Wireless Telecommunications Association (CWTA)

Board Memberships for other Reporting Issuers: Clean Air Power

Independence from OPG: Independent



#### Tom Mitchell

Age: 59 Whitby, Ontario, Canada

Tom Mitchell is the President and Chief Executive Officer at Ontario Power Generation Inc. (OPG). He was appointed to his current position in May 2009. Prior to assuming his current position, he was Chief Nuclear Officer responsible for Darlington, Pickering A and Pickering B. He also served as Site Vice President and Senior Vice President, Pickering B. Upon joining OPG in April 2002, he was Vice President, Nuclear Operations and was responsible for providing support to the Pickering and Darlington nuclear stations.

Tom has over 35 years of nuclear experience. Before joining OPG, he held the position of Vice President of the Assistance Division of the Institute of Nuclear Power Operations (INPO) in Atlanta, Georgia. During his career at INPO, he managed the radiological protection, plant analysis and engineering support departments. His considerable operations experience includes the Peach Bottom Atomic Power Station where he served as Manager of Operations Support, Director of Site Engineering, and Site Vice President. During his time with Peach Bottom, the performance of the plant went from being in regulatory shutdown to a recognized leader in safe and reliable operation. Tom's involvement in the nuclear industry has extended outside the United States. He served as the Deputy Director of the Atlanta Center for the World Association of Nuclear Operators (WANO), where he was involved in WANO activities in several parts of the world including CANDU plants at Bruce, Darlington, Pickering, Point Lepreau, Cernavoda and KNPP.

As of January 1, 2012, Tom is the Chair of the WANO Atlanta Centre Governing Board, and by virtue of that appointment, is a member of the WANO Governing Board in London, U.K. He was also asked by WANO to chair and lead a special post-Fukushima commission. Its mandate was to make recommendations on how WANO could improve its programs and structure in the wake of the disaster. In April 2012, Tom was appointed to the Board of Directors of the Electric Power Research Institute.

Tom Mitchell holds a master's degree in Mechanical Engineering from George Washington University and a bachelor's degree in Nuclear Engineering from Cornell University. He also holds an honorary doctorate from the University of Ontario Institute of Technology, conferred in June 2012.

Board/Committee Membership:	2014 Atten	dance:
Board	12 of 12	100%
The President and CEO attends all Committee meetings, excluding independent Director in-camera	40 of 40	100%
meetings/sessions.		

Principal Occupation: President & Chief Executive Officer, Ontario Power Generation Inc.

Board Memberships for other Reporting Issuers: None

Independence from OPG: Not Independent



#### Nicole Boivin

Age: 56 Toronto, Ontario, Canada

Nicole Boivin is a business executive with more than 30 years experience in financial services, telecommunications, and public and not for profit enterprises. Ms. Boivin was the Chief Branding and Communications Officer for Manulife, a leading Canadian based financial services company. In her 14 year career at Manulife, Ms. Boivin has had successive leadership roles in Human Resources, Branding, Marketing and Communications.

Prior to joining Manulife, Ms. Boivin held many roles spanning the public and not for profit sector which she credits for her holistic, creative, and collaborative approach. In the early 1990s, she was the Executive Director of the Sudbury United Way, followed by her role as the Assistant to the President at Laurentian University and, prior to Manulife, was a Director at BCE Media/Bell Canada.

Ms. Boivin is very familiar with all aspects of board governance; as a board member and as an executive working within board processes and dynamics. She is a National Board Member of Pathways to Education and a former provincial appointee to the Board of the Harbourfront Centre in Toronto where she also chaired the Development Committee. Nicole holds an MBA from Laurentian University where she developed her thesis on "Board Governance in Not for Profit organizations". She is also a member of the Institute of Corporate Directors and is fluently bilingual in French and English.

2014 Attendance:	
11 of 11	100%
6 of 6	100%
4 of 4	100%
	11 of 11 6 of 6

Principal Occupation: Corporate Director

#### Board Memberships for other Reporting Issuers: None

#### Independence from OPG: Independent

Interlocking Directorships on Boards of other Reporting Issuers: None



#### William Coley

Age: 71 Charlotte, North Carolina, U.S.A.

Bill Coley served as Chief Executive of British Energy from 2005 to 2009 when he retired following the successful combination of British Energy and EDF Energy. He was President of Duke Power from 1997 until his retirement in February 2003, holding various officer level positions in engineering, operations and senior management during his 37-year career with the company.

Mr. Coley is a director of Peabody Energy and E.R. Jahna Industries and a member of the International Technical Advisory Committee of Nuclear Electric Insurance Limited. He also served on the WANO Fukushima Commission chaired by Tom Mitchell.

Board/Committee Membership:	2014 Attendance	
Board (since January 2013)	12 of 12	100%
Audit and Finance Committee (February 2013 – April 2014)	1 of 1	100%
Nuclear Oversight Committee (February 2013)	5 of 5	100%
Governance and Nominating Committee * (since April 2014)	4 of 4	100%
Executive Talent Committee (since April 2014)	4 of 4	100%
Ad Hoc Committee (since April 2014)	6 of 6	100%
* Chair of Committee		

Principal Occupation: Retired Chief Executive of British Energy

Board Memberships for other Reporting Issuers: Peabody Energy

Independence from OPG: Independent



#### Elisabeth (Lisa) DeMarco Age: 47

Toronto, Ontario Canada

Lisa DeMarco is a senior partner at Zizzo Allan DeMarco LLP with over two decades of experience in law, regulation, policy, and advocacy relating to energy and climate change. She represents several governments and leading energy clients in a wide variety of natural gas, electricity and energy storage matters before various regulatory agencies, including the Ontario Energy Board and the National Energy Board. She has been an adjunct professor at Osgoode Hall Law School and lectures regularly.

Ms. DeMarco also assists leading Canadian energy companies on domestic and overseas power project development, renewable power projects, alternative fuel projects, cleantech development and finance, energy storage, carbon capture and storage, corporate social responsibility, environmental disclosure, clean energy finance, and sustainable business strategy.

She is ranked by Chambers Global as one of the world's leading climate change lawyers and regularly attends and advises on related United Nations negotiations. She is ranked and repeatedly recommended by LEXpert, Expert Guide, International Who's Who, and Chambers Canada as a leading energy (oil and gas) and environment lawyer. Ms. DeMarco has worked for multilateral development banks and energy companies on deals and projects in India, Brazil, Sri Lanka, Thailand, Argentina, Chile, Ireland, Africa, Mexico, China, Russia, California, Alberta, Ontario, and Quebec. She plays an ongoing and active role in the development and drafting of energy and greenhouse gas emissions policy, regulation, and law throughout Canada, and in various countries around the world. She was appointed to the Premier of Ontario's now completed Climate Change Advisory Panel and continues to serve as an appointed member of Ontario's Clean Energy Task Force.

Ms. DeMarco is a member of the Board of Directors of the Ontario Energy Association and a member of the Toronto Atmospheric Fund Investment Committee. She is a graduate of the University of Western Ontario (BSc Hon. – 1990), the University of Toronto (MSc. – 1992), Osgoode Hall Law School, York University (LLB – 1995) and the Vermont Law School (MSEL, summa cum laude – 1995).

Board/Committee Membership:	2014 Atter	2014 Attendance	
Board (since April 2014)	11 of 11	100%	
Audit and Finance Committee (since April 2014)	6 of 6	100%	
Risk Oversight Committee (since April 2014)	3 of 3	100%	

Principal Occupation: Lawyer

Board Memberships for other Reporting Issuers: None

Independence from OPG: Independent



#### Brendan Hawley Age: 62

Ottawa, Ontario, Canada

Brendan Hawley is the Principal of Brendan Hawley & Associates (BHA) – a bilingual consultancy specializing in advocacy communications that focuses on working with clients in both the public and private sectors.

An Ottawa native and honours graduate in history and journalism from St. Patrick's College, and Carleton University in Ottawa, Mr. Hawley worked for a decade in the federal government, and then in the private sector prior to establishing his firm in 2000. He held senior positions in communications, marketing, and public affairs at several major public and private sector organizations – including the Canadian Council of Professional Engineers, Export Development Corporation, and the Canadian Petroleum Products Institute.

Mr. Hawley has extensive experience in helping clients identify organizational goals in tandem with operational business plans. He also has significant experience in managing education strategies and programs on matters of Canadian energy. He initiated an Energy Summer School for federal MPs to facilitate a greater understanding of the economics of energy, and as part of a broader mandate dealing with federal and provincial issues related to energy pricing, facilities, and products. He also authored a popular guide to conducting advocacy at the federal level.

Mr. Hawley is affiliated with a number of business and philanthropic organizations but has recently focused more time on Ottawa's Canadian Museum of Nature, and the Museum of Science and Technology.

Board/Committee Membership:	2014 Attendance	
Board (since April 2014)	11 of 11	100%
Compensation and Human Resources Committee (since April 2014)	6 of 6	100%
Nuclear Oversight Committee (February 2013)	4 of 4	100%

Principal Occupation: Management Consultant

Board Memberships for other Reporting Issuers: None

Independence from OPG: Independent



#### John Herron Age: 61

Punta Gorda, Florida, U.S.A.

John Herron retired from Entergy where he was the President, CEO and Chief Nuclear Officer of Entergy Nuclear, with responsibility for Entergy's nuclear plants located in New York, Massachusetts, Vermont, Michigan, Louisiana, Mississippi and Arkansas as well as the company's management service to the Cooper Nuclear Station for the state of Nebraska.

He previously served as Entergy's Senior Vice president for nuclear operations handling the operational side of fleet management. Mr. Herron joined Entergy in February 2011 as Vice President, Operations at the Waterford 3 Nuclear Station in Killona, Louisiana. He then moved to New York as the senior Vice President of the Indian Point Energy Center in February 2002.

Mr. Herron began his career in nuclear operations in 1979 at Vermont Yankee Nuclear Power Corporation. Positions there included technical services superintendent, operations manager, technical programs manager, shift supervisor, and supervisory control room operator. In 1994, he moved to Brownville, Nebraska to become plant manager at Nebraska Public Power District's Cooper Nuclear Station.

Mr. Herron then joined the Tennessee Valley Authority as plant manager at Sequoyah Nuclear Plant in Soddy-Daisy, Tennessee, from October 1996 through July 1999. From July 1999 to February 2001, Mr. Herron served as site Vice President at TVA's Browns Ferry Nuclear Plant.

Prior to his career in utilities, he served in the U.S. Navy from 1972 to 1978. He was attached to the USS Tullibee and the S1C NPTU Windsor, where he was an instructor at the Nuclear Submarine Prototype School.

Mr. Herron holds a bachelor's degree in Business Management from Franklin Pierce College in Rindge, New Hampshire. He also attended the Advanced Management Program at the Harvard Business School in May 2005.

Mr. Herron currently serves on the board of directors for Duke Energy. He also served on the board of directors for the Institute of Nuclear Power Operations and on the Nuclear Strategic Issues Advisory Committee of the Nuclear Energy Institute. In the aftermath of Japan's 2011 earthquake, he was named to the WANO Post-Fukushima Commission and the U.S. nuclear industry's Fukushima Response Steering Committee.

Board/Committee Membership:	2014 Attendance	
Board (November 2013)	12 of 12	100%
Nuclear Oversight Committee * (December 2013)	5 of 5	100%
Compensation and Human Resources Committee (December 2013)	9 of 10	90%
Executive Talent Committee (since April 2014)	4 of 4	100%
Risk Oversight Committee (since August 2014)	1 of 1	100%
Ad Hoc Committee (since November 2014)	1 of 1	100%
* Chair of Committee		

Principal Occupation: Retired President, Chief Executive Officer and Chief Nuclear Officer, Entergy Nuclear

Board Memberships for other Reporting Issuers: Duke Energy (NYSE)

Independence from OPG: Independent



#### Roberta Jamieson Age: 62

Ohsweken, Ontario, Canada

Roberta L. Jamieson is a Mohawk woman from Six Nations of the Grand River Territory in Ontario, where she still resides. In November 2004, she was appointed President & CEO of Indspire, Canada's premiere Indigenous led charity, and Executive Producer of the Indspire Awards, a nationally broadcast gala honouring Indigenous achievement.

Under Roberta's leadership, the charity is flourishing. Indspire has disbursed almost \$65 million through close to 20,000 bursaries and scholarships to Indigenous students since its inception. Indspire's annual award disbursements have increased fivefold since Roberta's appointment. She has extended Inspire's youth career conferences to all regions of Canada and launched a recognition programs for educations of Indigenous students. Roberta also led the development of the *K-12 Indspire Institute*, a virtual resource centre focused on increasing high school completion rates and K-12 success. Under Roberta's leadership, Indspire launched an unprecedented \$20 million fundraising campaign in 2013 to support Indspire's *Building Brighter Futures: Bursaries and Scholarships Awards* program.

Roberta has enjoyed a distinguished career of firsts. She was the first First Nations woman to earn a law degree; the first non-parliamentarian appointed an ex-officio member of a House of Commons Committee; the first woman Ombudsman of Ontario (1989-1999); and in December 2011, she was the first woman elected Chief of the Six Nations of the Grand River Territory. Roberta also served as Commissioner of the Indian Commission of Ontario from 1986 to 1989.

She has earned numerous awards including the National Aboriginal Achievement Award (Law and Justice 1998); the Indigenous Bar Association's highest award, Indigenous Peoples Council Award (IPC); the Council of Ontario Universities' 2014 David C. Smith Awards; and 23 honorary degrees. She has been named three times to the Women's Executive Network's Top 100 list. She is a Member of the Order of Canada. She also serves on the board of directors of the Elections Canada Advisory Board.

Board/Committee Membership:	2014 Attendance:	
Board (May 2012)	12 of 12	100%
Governance and Nominating Committee (May 2012)	5 of 5	100%
Risk Oversight Committee * (May 2012)	4 of 4	100%
Executive Talent Committee (since April 2014)	4 of 4	100%
* Chair of Committee		

Principal Occupation: President and CEO of Indspire

Board Memberships for other Reporting Issuers: None

Independence from OPG: Independent



Ira Kagan Age: 52

Toronto, Ontario, Canada

Ira T. Kagan is a founding partner of KAGAN SHASTRI LLP (Lawyers). He received a B.Sc. from the University of Toronto in 1985 and a Juris Doctor from the University of Toronto in 1988. He was called to the Ontario Bar in 1990 and since then has focused on municipal and land use planning law on behalf of both the private (including many of the leading developers in the GTA) and public sector (conservation authorities, local and regional municipalities).

Ira regularly appears before the Ontario Municipal Board and many municipal council, and committees throughout the Greater Toronto Area. His practice includes all aspects of land use planning, including development applications, negotiations and mediations, appeals (both at the Ontario Municipal Board and the courts) and strategic decisions throughout. He is a regular presenter at industry and continuing legal education seminars, and has been involved in many of the leading land use planning cases in the Greater Toronto Area.

In 2005-2006, KAGAN SHASTRI LLP was named the top municipal law firm in the GTA by Nova Res Urbis and since then has consistently ranked in one of the top spots.

Board/Committee Membership:	2014 Attendance	
Board (since April 2014)	9 of 11	82%
Audit and Finance Committee (since April 2014)	5 of 6	83%
Risk Oversight Committee (since April 2014)	2 of 3	67%

Principal Occupation: Lawyer

Board Memberships for other Reporting Issuers: None

Independence from OPG: Independent



M. George Lewis Age: 54

Toronto, Ontario, Canada

As a member of the RBC Group Executive since February 2007, George Lewis is one of eight executives responsible for setting the overall strategic direction of RBC, Canada's largest bank. Mr. Lewis is Group Head, Wealth Management and RBC Insurance, which is the largest wealth manager in Canada and fifth largest globally. Mr. Lewis is also Chairman and a Portfolio Manager of RBC Global Asset Management Inc. Prior to his appointment to Group Executive, Mr. Lewis was Head of Wealth Management for the Canadian Personal and Business banking segment of RBC, as well as serving as Head of Banking Products for that segment. Formerly, he was Managing Director, Head of Institutional Equity Sales, Trading and Research with RBC Capital Markets and was Canada's top-rated equity research analyst for three consecutive years, focusing on electric utilities and natural gas pipelines and telecom companies.

Mr. Lewis has extensive experience in the investment industry and has a Master of Business Administration degree with distinction from Harvard University, a Bachelor of Commerce degree with high distinction from Trinity College at the University of Toronto, and is a chartered financial analyst and an FCA/FCPA, as well as being certified by the Institute of Corporate Directors. Mr. Lewis serves on the Board of Directors of the Canadian Film Centre and the Toronto Symphony Orchestra (Past-Chair). He is a current member and Past Chair of the Bishop's Company of the Anglican Diocese of Toronto, as well as a Patron and member of the Cabinet of the United Way of Greater Toronto. Mr. Lewis also serves as the Honorary Colonel Commandant of the Chaplain Branch of the Canadian Armed Forces.

Board/Committee Membership:	2014 Attendance:	
Board (February 2005)	12 of 12	100%
Audit and Finance Committee* (May 2010)	7 of 7	100%
Governance and Nominating Committee (May 2010)	4 of 5	80%
Ad Hoc Committee (September 2012)	8 of 9	89%
Executive Talent Committee (December 2013)	3 of 5	60%
* Chair of Committee		

Principal Occupation: Financial Services Executive

Board Memberships for other Reporting Issuers: None

Independence from OPG: Independent



#### Peggy Mulligan Age: 56

Mississauga, Ontario, Canada

Peggy Mulligan was the Executive Vice President and Chief Financial Officer, Valeant Pharmaceuticals International, Inc. until December 2010. Prior to this, she was a Principal at Priiva Consulting, and before this she served as Executive Vice President and Chief Financial Officer of Linamar Corporation. Prior to Linamar, Mrs. Mulligan was with the Bank of Nova Scotia for eleven years as Executive Vice President, Systems and Operations and Senior Vice President, Audit and Chief Inspector. Before joining Scotiabank, she was an Audit Partner with PricewaterhouseCoopers in Toronto. She holds a B. Math (Honours) from the University of Waterloo and was named a Fellow of the Institute of Chartered Accountants (FCA) of Ontario in 2003.

Board/Committee Membership:	2014 Attendance:	
Board (December 2005)	12 of 12	100%
Compensation and Human Resources Committee* (March 2012)	10 of 10	100%
Risk Oversight Committee (May 2010 – April 2014)	1 of 1	100%
Ad Hoc Committee (September 2012)	9 of 9	100%
Executive Talent Committee (December 2013)	5 of 5	100%
Audit and Finance Committee (since April 2014)	6 of 6	100%
* Chair of Committee		

Principal Occupation: Corporate Director

Board Memberships for other Reporting Issuers: Capital Power Corporation, Tuckamore Capital

Independence from OPG: Independent

#### Interlocking Directorships on Boards of other Reporting Issuers: None



**Gerry Phillips** Age: 74 Ajax, Ontario, Canada

Gerry Phillips was the MPP for the east Toronto riding of Scarborough-Agincourt from 1987 to 2011. He served in six cabinet portfolios, including twice as Minister of Energy, where he was OPG's Shareholder from 2007 to 2008 and again on an interim basis from November 2009 to January 2010. Before entering public life, Mr. Phillips graduated from the University of Western Ontario's School of Business and worked in the marketing department of Procter and Gamble. In 1970 he joined the consulting firm of Canadian Marketing Associates and became President in 1977. He later founded two successful spin-off companies - the Sales Development Group in 1979 and the Retail Resource Group in 1982. By 1987, he was Chair of all three companies, with a combined workforce of approximately 300.

Mr. Phillips has an Honours B.A. from the Western School of Business. He was the Chair of the Management Board of Cabinet and Minister responsible for Securities Regulation in Ontario.

Board/Committee Membership:	2014 Attendance:	
Board (January 2013)	12 of 12	100%
Audit and Finance Committee (February 2013 – April 2014)	1 of 1	100%
Risk Oversight Committee (February 2013)	4 of 4	100%
Ad Hoc Committee (October 2013)	8 of 9	89%
Nuclear Oversight Committee (since April 2014)	4 of 4	100%

Principal Occupation: Retired

#### Board Memberships for other Reporting Issuers: None

Independence from OPG: Independent

All of the Directors of the Company have been engaged for more than five years in their current principal occupations, except as set out below:

Ms. Boivin was Senior Vice President, Human Resources and Communications at Manulife Financial from June 2007 to December 2011 and Chief Branding & Communications Officer from January 2012 to May 2014 at Manulife Financial.

Ms. DeMarco was Partner at Macleod Dixon LLP from March 2002 to January 2012, Partner at Norton Rose Canada LLP from January 2012 to June 2013 and Partner at Norton Rose Fulbright LLP from June 2013 to December 2014.

Mr. Herron was President, CEO and Chief Nuclear Officer at Entergy Corporation from December 2009 to April 2013.

Ms. Mulligan was Chief Financial Officer of Valeant Pharmaceuticals International Inc. from September 2008 to December 2010.

Mr. Phillips was the Minister without portfolio from June 2008 to October 2011, Ontario Minister of Energy and Infrastructure from November 2009 to January 2010, Chair of Cabinet from June 2008 to October 2011, and Chair of the Select Committee on the TMX Transaction from February 2011 to April 2011.

#### **Orientation and Continuing Education**

The Governance and Nominating Committee is responsible for reviewing and recommending appropriate orientation programs. New Directors are provided relevant documentation relating to OPG's governance practices and policies and to its business. Directors attend plant tours of OPG generating facilities, where they also receive comprehensive introductory briefings from OPG senior executives on OPG's operations and business activities.

The Board supports and sponsors the continuing education of OPG Directors, both in the business of OPG and in their duties as Directors. Annual plant tours of OPG's major facilities, site visits to projects with OPG's First Nations business partners, and special presentations by internal and external experts are made to the Board or a Committee on topical business-related issues or on specific aspects of OPG's operations. In 2014, topics included: strategy, energy industry trends, risk, and corporate governance. Directors are provided with articles and publications on current topics of interest. Board members have full access to all Board and Committee materials and records. OPG has developed a Director Governance Handbook which provides Directors with information necessary to fulfill their roles as Directors, including Director Duties and Obligations under the OBCA, relevant corporate policies and procedures. OPG also sponsors Director attendance at the Institute of Corporate Directors "Director Education Program", or equivalent, and sponsors attendance at the Goizueta Director program for members of the Nuclear Oversight Committee.

#### **Ethical Business Conduct**

The Board has adopted a policy for ethical business behaviour and a Code of Business Conduct. The mandate of the Compensation and Human Resources Committee requires that it receive regular reports through the year on the Code of Business Conduct in order to satisfy itself that appropriate codes of conduct and compliance programs are in place, are being enforced, and remedial action is being taken. Both the Compensation and Human Resources Committee and the Audit and Finance Committee receive quarterly reports by Management on the Code of Business Conduct (including reports on substantiated cases of fraud) and the disposition of cases including disciplinary action, as well as an annual report on the Code of Business Conduct and a report on the annual review of the Board policy. A copy of OPG's Code of Business Conduct is available on <a href="https://www.opg.com">www.opg.com</a> and has been filed on SEDAR (<a href="https://www.sedar.com">www.sedar.com</a>). The Audit and Finance Committee has also established procedures for the receipt, retention and treatment of complaints received pertaining to accounting, internal accounting controls or auditing matters, and the confidential anonymous submission by employees concerning such matters.

#### **Nomination of Directors**

The Governance and Nominating Committee, which is comprised entirely of independent Directors within the meaning of NI 52-110, is responsible for conducting an annual review of the OPG Board's principles and systems of governance, oversight of annual Board, Committee, and Director evaluations. The Governance and Nominating Committee recommends nominees to the Board. The Board may submit recommended candidates to the Shareholder. Nominations of Directors by the Shareholder may also be considered by the Governance and Nominating Committee. When considering a potential candidate, the Governance and Nominating Committee considers the qualities, experience, and skills that the Board, as a whole, should have in light of the business opportunities and risks facing OPG. The attributes the Governance and Nominating Committee consider in a candidate include diversity, integrity, business judgment and experience, professional expertise, independence from management, financial literacy, communication and listening skills, as well as sufficient time available to fulfill his or her obligations as a Board member. The Board's policy on diversity is to consider a diverse candidate for every vacancy on the Board. OPG defines diversity to include: women, aboriginal peoples, people with disabilities, and visible minorities. These four enumerated groups mirror the four enumerated groups in the definition of "designated groups" in the federal *Employment Equity Act*.

From time to time the Governance and Nominating Committee may engage outside advisors to assist in identifying potential candidates.

#### **Director Tenure/Board Renewal**

The OPG Board Charter guideline for board tenure is 10 to 15 years. When considering board renewal, the Governance and Nominating Committee regularly reviews the OPG Board Skills Profile. The Board maintains an "evergreen list" of potential board candidates. From time to time the Committee makes recommendations to add skills to the Board that reflect OPG business opportunities and risks.

## Cease trade orders, bankruptcies, penalties or sanctions

To the knowledge of OPG, no director or executive officer of OPG, or a shareholder holding a sufficient number of securities of OPG to affect materially the control of OPG (a) is, as at the date of the MD&A, or has been within the 10 years before the date of the MD&A, a director or executive officer of any company (including OPG) that, while that person was acting in that capacity, or within a year of that person ceasing to act in that capacity, became bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or was subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold its assets; or (b) has, within the 10 years before the date of the MD&A, become bankrupt, made a proposal under any legislation relating to bankruptcy, or become subject to or instituted any proceedings, arrangement or compromise with creditors, or become subject to or instituted any proceedings, arrangement or compromise with creditors, or become subject to or instituted any proceedings, arrangement or compromise with creditors, or had a receiver manager or trustee appointed to hold the assets of the director, executive officer or shareholder, except for:

• Bernard Lord was a director of AEA Technology from the fall of 2010 until the fall of 2012 when it became insolvent.

# Representation of Women

## Board of Directors

As noted under "Nomination of Directors", the Governance and Nominating Committee will consider a diverse candidate for every vacancy on the Board. OPG defines diversity as: women, aboriginal peoples, people with disabilities, and visible minorities. The Board has signed on to the Catalyst Accord. The Board has set a target for diverse representation on the Board of 33 percent. Currently, four of the 12 members of the Board, 33 percent, are women.

## Senior Management

OPG strives to create a workforce that reflects diverse populations of the communities in which it operates. As of December 31, 2014 women filled 21.5% of Corporate Officer roles and 23% of senior management (senior managers and above) positions. This represented a 1% increase from 2013. OPG tracks and monitors diversity succession planning metrics and strives to have a diverse candidates list for senior management positions. A target for representation in executive officer positions is under consideration.

## Compensation

## Director Compensation

The OPG Director compensation structure was established in 2005 and has remained largely unchanged. The Governance and Nominating Committee is responsible for monitoring and reviewing the level and nature of compensation of OPG Directors. Pursuant to the recommendations of the 2007 Report of the Agency Review Panel, OPG benchmarks against the 50<sup>th</sup> percentile of compensation levels for a combined private and public sector comparator group. The last review occurred in May 2012. The Governance and Nominating Committee benchmarked OPG's Director Compensation against comparable public and private companies and concluded that OPG Director Compensation was at the 38<sup>th</sup> percentile of comparator companies. However, the Committee recommended that no change be made to the compensation of Directors at this time in view of legislative constraints on compensation of OPG Management.

In March 2012, the government introduced Bill 55, the *Strong Action for Ontario Act (Budget Measures),* which included measures to extend controls over executive compensation. This act impacts OPG's non-unionized employees and is in effect until the Province of Ontario ceases to have a budget deficit. Bill 55 applies to the Vice President level and up as well as full-time members of the Board of Directors. From March 25, 2010 to March 31, 2012, the *Public Sector Compensation Restraint to Protect Public Services Act, 2010,* froze the compensation

structures for Members of Provincial Parliament, and non-represented political staff and employees across the Ontario Public Service and Broader Public Sector, including non-represented employees and directors of OPG.

OPG's Director compensation framework provides each Director who is not an employee of OPG with an annual retainer of \$25,000. Directors also receive a \$3,000 annual retainer to chair committees and for each committee that they are a member of. In 2006, the retainer for the Audit and Finance Committee chair was set at \$8,000 in recognition of the increased duties and responsibilities placed upon the chair of the Audit and Finance Committee. In 2010, in recognition of the increased duties and responsibilities placed upon the chair of the Compensation and Human Resources Committee, the annual retainer was set at \$5,000.

Directors are compensated for each meeting that they attend and receive a fee of \$1,500 or \$750, as determined by the Board Chair or respective Committee chair.

In order to retain national and international expertise, non-resident Directors are compensated in U.S. dollars and Directors who travel over certain distances receive a travel fee to cover travel time related to Board and Committee meetings they attend.

Since 2004, the Chair of the Board, in his role as non-executive Chair, receives an all-inclusive annual fee of \$150,000 and is reimbursed for out-of-pocket expenses including travel and other expenses.

#### **CEO** Compensation

The Compensation and Human Resources Committee of the Board consists of four members, all of which are independent of OPG within the meaning of NI 52-110. The Committee oversees, on behalf of the Board, the setting of the CEO's annual goals and objectives and the annual review of CEO performance, and makes recommendations to the Board with respect to CEO compensation. The Compensation and Human Resources Committee may seek input from an independent advisor with regard to monitoring and benchmarking compensation developments.

In July 2009, when the current CEO was appointed, the compensation terms were established based on the benchmarks recommended in the 2007 Report of the Agency Review Panel on Phase 1 of its Review of Ontario's Provincially Owned Electricity Agencies. In March 2012, the government introduced Bill 55, the *Strong Action for Ontario Act (Budget Measures)*, which included measures to extend controls over executive compensation. This act impacts OPG's non-unionized employees and is in effect until the Province of Ontario ceases to have a budget deficit. From March 25, 2010 to March 31, 2012, the *Public Sector Compensation Restraint to Protect Public Services Act, 2010*, froze the compensation structures for Members of Provincial Parliament and for non-represented political staff and employees across the Ontario Public Service and Broader Public Sector, including non-represented employees and Directors of OPG.

## **Committees of the Board of Directors**



The following Committees are the current Board Committees as of March 13, 2015:

#### Audit and Finance Committee

This Committee is responsible for the integrity, quality, and transparency of OPG's financial information, the adequacy of the financial reporting process, the systems of internal controls, and OPG's related principles, policies, and procedures which Management have established. The Committee is responsible for the oversight of the Company's regulatory filings, financial statements, MD&A, and press releases, prior to their disclosures to the public, including approval of quarterly financial statements and recommending approval of the annual financial statements and various other annual disclosures of OPG Inc. to the Board. The Committee is also responsible for the appointment, compensation, and oversight of the external auditor. The Committee provides oversight of OPG's corporate financing strategies including: policies related to financial exposure management; processes for identifying major strategic, operational and transactional financial risks; performance of the OPG Pension Fund, the Used Fuel Fund and the Decommissioning Fund; reviews and approves the audited financial statements of the Funds and the statement of investment policies and procedures for the OPG Pension Fund and the Decommissioning Fund; reviews for the OPG Pension Fund and the Decommissioning Fund.

As of the date hereof, the Audit and Finance Committee consists of George Lewis (Chair), Elisabeth (Lisa) DeMarco, Ira Kagan, and Peggy Mulligan.

#### Risk Oversight Committee

This Committee is responsible for the oversight of enterprise-wide risk and associated risk management activities, including oversight of OPG's environment and dam safety managed systems and OPG's Aboriginal relations. The Committee is also responsible for reviewing Management's assessment of significant operational, transactional, and strategic risks to achieving Business Plan objectives in the Hydro-Thermal Operations, Commercial Operations & Environment, Business Services and Administrative Services and all other non-Nuclear and non-Finance corporate and central support services. The Committee receives the Enterprise Risk Management report, which includes information on nuclear risks and financial risks that are also reported to the Nuclear Oversight Committee and the Audit and Finance Committee, respectively. Additionally, the Risk Oversight Committee is responsible for oversight of the development, risk management, financing, and execution of complex major non-nuclear projects.

As of the date hereof, the Risk Oversight Committee consists of Roberta Jamieson (Chair), Elisabeth (Lisa) DeMarco, John Herron, Ira Kagan, and Gerry Phillips.

#### Nuclear Oversight Committee

This Committee is responsible for the oversight of safe and efficient operations of OPG's nuclear facilities, including nuclear waste, decommissioning liabilities and operations, and oversight of the refurbishment of OPG's nuclear facilities. The Committee is also responsible for reviewing Management's assessment of significant operational, transactional, and strategic risks to achieving Nuclear Business Plan objectives. Additionally, the Committee is responsible for the development, risk management, financing, and execution of major nuclear projects. The Committee is also responsible for reviewing annually and confirming the appointment of external advisors/assessors

of OPG's nuclear operations and Management's response and implementation of the results and major findings from such internal and external assessments. The Committee ensures that OPG's nuclear facilities and materials are in compliance with existing laws and CNSC regulations.

As of the date hereof, the Nuclear Oversight Committee consists of John Herron (Chair), Bill Coley, Brendan Hawley, and Gerry Phillips.

## Compensation and Human Resources Committee

This Committee provides oversight of OPG's human resources and compensation policies and practices, including CEO objectives and compensation, disclosure on compensation and human resources matters, leadership talent review, succession planning, and labour negotiations. The Committee also provides oversight of OPG's pension plans and related policies. The Committee is responsible for ensuring that an effective Code of Business Conduct is in place at OPG and monitoring compliance with the Code.

As of the date hereof, the Compensation and Human Resources Committee consists of Peggy Mulligan (Chair), Nicole Boivin, Brendan Hawley, and John Herron.

## Governance and Nominating Committee

This Committee oversees the Board's governance program and practices that are consistent with high standards of corporate governance, including annually reviewing and assessing the Board's system of corporate governance with a view to maintaining these high standards. The Committee is responsible for overseeing OPG's reputation management plan. The Committee identifies and recommends to the Board candidates for nomination to the Shareholder. Finally, the Committee oversees OPG's processes for Board, Committee, and Director assessments, as well as Director compensation and new Director orientation.

As of the date hereof, the Governance and Nominating Committee consists of Bill Coley (Chair), Nicole Boivin, Roberta Jamieson, and George Lewis.

## Ad Hoc Committee

An ad hoc committee of the Board may, from time to time, identify and assess alternate strategies for OPG.

As of the date hereof, the Ad Hoc Committee consists of Bernard Lord (Chair), Bill Coley, John Herron, George Lewis, Peggy Mulligan, and Gerry Phillips.

### Executive Talent Committee

In December 2013, the OPG Board of Directors established an Executive Talent Committee, with a mandate to conduct searches for executive talent.

As of the date hereof, the Executive Talent Committee consists of the Board and committee chairs: Bernard Lord (Board Chair), Bill Coley, John Herron, Roberta Jamieson, Peggy Mulligan, and George Lewis.

With respect to attendance at Committee meetings, Directors may attend other Committee meetings from time to time as required. Directors have access to all Board and Committee meeting material, unless otherwise directed by the Board Chair.

## Assessments

The Governance and Nominating Committee is responsible for the annual process for evaluating the performance of the Board, its Committees, and its individual Directors. The Board and Committee evaluations are based upon the completion of confidential questionnaires regarding assessment of its performance and compliance with the Board and Committee Charters. Director evaluations are based on self-assessment questionnaires, which are submitted in confidence to the Board Chair and the Chair of the Governance and Nominating Committee. In addition, the process

includes a follow-up one-on-one meeting between each Director and the Board Chair. The Governance and Nominating Committee reports the results of the evaluations and makes recommendations to the Board for enhancing the Board's governance and effectiveness.

## Further Information on OPG Governance

OPG provides additional information on OPG's governance on its website (<u>www.opg.com</u>) including:

- Memorandum of Agreement with the Shareholder
- Shareholder Directives
- List of Corporate Officers
- Board and Committee Charters
- Board and Committee Chair Position Descriptions
- Board of Directors Conflict of Interest Policy
- First Nation and Métis Relations Policy
- Code of Business Conduct
- Disclosure Policy
- Environmental Policy
- Employee Health and Safety Policy
- Nuclear Safety Policy
- Safe Operations Policy

## AUDIT AND FINANCE COMMITTEE INFORMATION

NI 52-110, has been implemented by Canadian securities regulatory authorities to encourage reporting issuers to establish and maintain strong, effective, and independent audit committees, which enhance the quality of financial disclosure and ultimately foster increased investor confidence in Canada's capital markets. Information on OPG's Audit and Finance Committee, including the Audit and Finance Committee Charter, is as follows:

## Audit and Finance Committee Charter

## Purpose

The basic function and purpose of the Audit and Finance Committee is to assist the Board of Directors in their responsibility for oversight of matters relating to:

- The integrity, quality and transparency of OPG's financial information;
- The adequacy of the financial reporting process;
- The systems of internal controls, and OPG's related principles, policies and procedures which Management have established;
- The performance of OPG's internal audit function and the external auditors;
- The performance, qualifications and independence of OPG's external auditors;
- OPG's compliance with related legal and regulatory requirements and internal policies;
- Corporate financing strategies and vehicles including strategies and policies related to financial exposure management; and
- The OPG Pension Fund and the Used Fuel Fund and Decommissioning Fund.

The function of the Audit and Finance Committee is oversight. Management is responsible for the preparation, presentation and integrity of OPG's financial statements. Management is responsible for maintaining appropriate accounting and financial reporting principles and policies and internal controls and procedures that provide for compliance with accounting standards and applicable laws and regulations.

## Organization

## Members

The Audit and Finance Committee shall consist of three or more Directors as determined by the Board of Directors. All members of the Committee shall be independent as defined by the Ontario Securities Commission, and not "affiliated" with OPG.

The Board shall appoint the members of the Committee and the Chair of the Committee annually. The Board may appoint a member to fill a vacancy which occurs in the Committee between annual elections of Directors. Any member of the Committee may be removed or replaced at any time by the Board.

If a member of the Committee becomes "affiliated" with OPG, the member may continue as a member of the Committee with the approval of the Board Chair, in consultation with the Corporate Secretary.

As a "venture issuer", OPG is exempt from the statutory requirements of National Instrument 52-110 requiring members of Audit Committees be independent and financially literate. However, OPG considers such independence and financial literacy to be "best practice" and therefore each of the members of the Audit and Finance Committee shall satisfy the applicable independence and financial literacy requirements of the laws and regulations governing Audit Committees.

The Board of Directors shall confirm that each member of the Audit and Finance Committee is financially literate; as such qualification is interpreted by the Board of Directors in its business judgment, and in compliance with National Instrument 52-110 and its Companion Policy.

#### Meetings

The Committee shall meet as frequently as it determines but not less than quarterly. During quarterly meetings, the Committee will hold separate in camera sessions with the external auditors, the Chief Internal Audit Executive, and Management to discuss any matters that the Committee believes should be discussed and to provide a forum for any relevant issues to be raised.

Notice of the time and place of each meeting of the Committee must be given to each member of the Committee not less than 48 hours before the time of the meeting.

A quorum of the Committee shall be a majority of its members, but not less than two. The powers of the Committee may be exercised at a meeting at which a quorum of the Committee is present in person or by telephone or other electronic means, or by a resolution signed by all members entitled to vote on that resolution at a meeting of the Committee. Each member is entitled to one vote in Committee proceedings.

The Chair shall preside at all meetings of the Committee at which he or she is present (or if not able to be present designate another member of the Committee to chair the meeting) and shall develop the agenda for each Committee meeting. The agenda for each meeting of the committee shall be delivered to each member of the Committee at least 48 hours prior to any meeting of the Committee, together with such other materials as the chair determines necessary.

The Chair shall designate from time to time a person who may, but not need to be, a member of the Committee, to be Secretary of the Committee. Minutes shall be kept of all meetings of the Committee and shall be maintained by the Secretary of the Committee. The procedure at meetings is to be determined by the Committee unless otherwise determined by the by-laws of OPG, by a resolution of the Board or by this Charter.

The Committee may meet in camera (without management present) at any time during the meeting consistent with the Board guideline on the conduct of in camera sessions and the keeping of minutes from in camera sessions.

The Committee may invite any Director, officer or employee of OPG or OPG's counsel or any other person to attend meetings of the Committee to assist in the discussion and examination of the matters under consideration by the Committee.

#### Reports

The Committee will report its activities and actions to the Board of Directors with recommendations, as the Committee deems appropriate.

The Committee will provide for inclusion in OPG's financial information or regulatory filings any report from the Audit and Finance Committee required by applicable laws and regulations and stating among other things whether the Audit and Finance Committee has:

- (i) Reviewed and discussed the audited financial statements with Management.
- (ii) Discussed pertinent matters with the internal and external auditors.
- (iii) Received disclosures from the external auditors regarding the auditors' independence and discussed with the auditors their independence.
- (iv) Recommended to the Board of Directors that the audited financial statements be included in OPG's Annual Report.

#### Authority

While the Audit and Finance Committee has the responsibilities and powers set forth in this Charter, it is not the duty of the Audit and Finance Committee to plan or conduct audits or risk assessments, or to determine that OPG's financial statements and disclosures are complete and accurate and are in accordance with generally accepted accounting principles and applicable rules and regulations. These are the responsibility of Management and, as appropriate, the external auditor.

The Committee is responsible for the oversight of the funds invested in the OPG Pension Fund under the *Ontario Pension Benefits Act*, and the funds invested in the Used Fuel Fund and the Decommissioning Fund under the Ontario Nuclear Funds Agreement with the Province of Ontario.

In carrying out its oversight responsibilities, the Audit and Finance Committee and the Board will necessarily rely on the expertise, knowledge and integrity of OPG Management, and internal and external auditors.

The Audit and Finance Committee shall have the authority to set and pay the compensation for any advisors employed by the Committee.

The Audit and Finance Committee shall have the authority to communicate directly with the internal and external auditors.

#### Delegation of Authority

The Committee may delegate to any employee of OPG or a sub-committee the authority to:

- (i) execute or carry out any decision of the Committee; and/or
- (ii) exercise any right, power or function of the Committee on such terms and conditions and within such limits as the Committee may establish, except that the Committee may not delegate its oversight responsibilities.

#### Access to Management and Outside Advisors

The Audit and Finance Committee shall have unrestricted access to members of Management and relevant information.

The Audit and Finance Committee has the authority to retain legal counsel, accountants or other advisors to assist it in the conduct of any investigation, as it determines necessary to carry out its duties.

## Committee Responsibilities and Duties

The Committee shall perform the duties set out in this Charter and shall perform such other duties as may be necessary or appropriate under applicable law or securities rules, or as may be delegated to the Committee by the Board from time to time.

The Committee maintains oversight of OPG's audit and finance activities and assists the Board by reviewing and making recommendations to the Board with respect to:

- 1. General
  - a) Conduct or authorize investigations into any matters within the Committee's scope of responsibilities.
  - b) Review and recommend approval to the Board, the appointment or replacement of the Chief Financial Officer (CFO), Chief Internal Audit Executive and the Chief Investment Officer.
  - c) Approve on behalf of the Board, quarterly financial statements and disclosures for OPG Inc.
  - d) Review and recommend to the Board OPG's rate application to the Ontario Energy Board, including proposed payment amounts, hearing strategies and key issues.
  - e) Review and recommend Board approval of OPG's business plan.

## 2. Internal Controls

- a) Review with Management, reports demonstrating compliance with finance risk management policies.
- b) Review with OPG's General Counsel and others any legal, tax, or regulatory matters that may have a material impact on OPG's operations and the financial statements, including, but not limited to, violations of securities law or breaches of fiduciary duty.
- c) Review with Management, the Chief Internal Audit Executive, and the external auditors, the scope of review of internal control over financial reporting, significant findings, recommendations and Management's responses for implementation of actions to correct weaknesses in internal controls.
- d) Review disclosures made by the Chief Executive Officer and Chief Financial Officer during the certification process regarding significant deficiencies in the design or operation of internal controls or any fraud that involves Management or other employees who have a significant role in OPG's internal controls.
- e) Review the expenses of the Chairman, Board, President and the President's direct reports on an annual basis, and of any other senior officers and employees the Committee considers appropriate.
- 3. Internal Audit
  - a) Evaluate the internal audit process and define expectations in establishing the annual internal audit plan, including the organizational structure and the adequacy of resources.
  - b) Approve the Charter of the internal audit function annually.
  - c) Evaluate the audit scope and role of Internal Audit.
  - d) Approve the annual internal audit plan.
  - e) Consider and review with Management:
    - (i) Significant findings and Management's response including the significance of the finding, the adequacy of the control processes, and the timetable for implementation of Management actions to correct weaknesses.
    - (ii) Any difficulties encountered in the course of their work (such as restrictions on the scope of their work or access to information).
    - $\ensuremath{\text{(iii)}}$  Any changes required in the planned scope of the audit plan.
    - (iv) The internal audit budget.
  - Review Internal Audit's confirmation of organizational independence and disclosure of any conflict of interest.

g) Receive reports from the Chief Audit Executive on independent reviews and investigations of fraud allegations and matters that may involve fraud.

## 4. External Auditor

- a) Recommend to the Board of Directors the external auditor to be nominated for the purpose of preparing or issuing an auditor's report or performing other audit, review or attest services for OPG, and the compensation of the external auditor.
- b) Oversee the work of the external auditor engaged for the purpose of preparing or issuing an auditor's report or performing other audit, review or attest services for OPG, including the resolution of disagreements between Management and the external auditor regarding financial reporting.
- c) Review the independence and qualifications of the external auditor.
- d) At least annually, obtain and review a report by the external auditor describing the auditing firm's internal quality control procedures, any material issues raised by the most recent internal quality-control review or peer review of the auditing firm or by any inquiry or investigation by governmental or professional authorities within the preceding five years respecting one or more independent audits carried out by the external auditor and any steps taken to deal with any such issues and all relationships between the external auditors and OPG.
- e) Review the scope and approach of the annual audit plan with the external auditors.
- f) Discuss with the external auditor the quality and acceptability of OPG's accounting principles including all critical accounting policies and practices used, any alternative treatments that have been discussed with Management, as well as any other material communications with Management.
- g) Assess the external auditor's process for identifying and responding to key audit and internal control risks.
- h) Ensure the rotation of the lead audit partner and other audit partners every seven years, and consider regular rotation of the audit firm.
- i) Evaluate the performance of the external auditor annually and present its findings to the Board of Directors.
- j) Conduct a comprehensive review of the external audit firm at least once every five years and present the findings to the Board of Directors.
- k) Determine which non-audit services the external auditor is prohibited by law or regulation, or as determined by the Audit and Finance Committee, from providing and pre-approve all services provided by the external auditors. The Committee may delegate such pre-approval authority to a member of the Committee. The decision of any Committee member to whom pre-approval authority is delegated must be presented to the full Audit and Finance Committee at its next scheduled meeting.
- I) Review and approve all related-party transactions.
- m) Review and approve OPG's hiring policies regarding partners, employees and former partners and employees of the present and former external auditor of OPG.

## 5. Financial Reporting

- a) Review with Management and the external auditors OPG's interim financial information and disclosures under Management Discussion and Analysis (MD&A) and earnings press release, prior to filing.
- b) Review and make recommendations to the Board of the Annual Information Form, if required, prior to filing with securities regulators.
- c) Satisfy itself that adequate procedures are in place for the review of OPG's public disclosure of financial information extracted or derived from OPG's financial statements, other than the public disclosure referred to in subsection 5a above, and periodically assess the adequacy of those procedures.
- d) Review with Management and the external auditors, at the completion of the annual audit:
  - (i) The annual financial statements, MD&A, related footnotes and any documentation required by the *Securities Act* to be prepared and filed by OPG or that OPG otherwise files with the Ontario Securities Commission.
  - (ii) The external auditors' audit of the financial statements and their report.

- (iii) Any significant changes required in the external auditors' audit plan.
- (iv) Any difficulties or disputes with Management encountered during the audit.
- (v) OPG's accounting principles.
- (vi) Other matters related to conduct, which should be communicated to the Committee under generally accepted auditing standards.
- e) Review significant accounting and reporting issues and understand their impact on the financial statements. These include complex or unusual transactions and highly judgmental areas; major issues regarding accounting principles and financial presentations, including significant changes in OPG's selection or application of accounting principles; the effect of regulatory and accounting initiatives, as well as off-balance sheet arrangements on OPG's financial statements.
- f) Review analysis prepared by Management and/or the external auditor detailing financial reporting issues and judgments made in connection with the preparation of financial information, including analysis of the effects of alternative generally accepted accounting principles methods.
- g) Advise Management, based upon the Audit and Finance Committee's review and discussion, whether anything has come to the Committee's attention that causes it to believe that the financial statements contain an untrue statement of material fact or omit to state a necessary material fact.
- 6. Investment Funds

The Committee shall review and make recommendations to the Board on:

- a) The appointment of the auditor of the OPG Pension Fund and the Used Fuel Fund and Decommissioning Fund.
- b) The broad objectives, governance frameworks and risk posture for the funds.

In addition, the Committee shall

- c) Approve the appointment of the members of OPG's Pension Committee. In addition, the Committee may, at any time, remove or replace any member of the Pension Committee or fill a vacancy on the Pension Committee. The Pension Committee Chair may temporarily appoint a senior management employee to fill a vacancy on the Pension Committee until the next regularly scheduled Audit and Finance Committee meeting.
- d) Approve the annual audited financial statements for the OPG Pension Fund, the Used Fuel Fund and the Decommissioning Fund.
- e) Approve the investment policies and procedures for the OPG Pension Fund, as required by the Ontario Pension Benefits Act and its regulations, and for the Decommissioning Funds, as required by the Ontario Nuclear Funds Agreement.
- f) Approve the design of and modifications to the funds.
- g) Monitor quarterly and annually or by exception, compliance with and appropriateness of the asset mix policy; total fund and asset class returns relative to benchmarks; material compliance with breaches of policies or procedures; and, work conducted by the plan actuary.
- Report to the Board at least annually on the status of the Pension Fund and Used Fuel and Decommissioning Fund including funded status; total returns; compliance with fund objectives and risk posture; and, compliance with legislation and governance relating to fund management.

The Committee shall receive a copy of the report to the Nuclear Oversight Committee on the calculation of OPG's nuclear waste liability.

The Committee shall provide advice to the Compensation and Human Resources Committee on the affordability of changes to the OPG Pension Plan.

7. Corporate Finance and Strategic, Operational, and Transactional Risks

The Committee shall review and make recommendations and advising the Board with respect to:

- a) Corporate financing objectives, strategies and vehicles, credit facilities, including accessing capital debt markets, and any other related financing activities.
- b) Ensuring a process exists for identifying major strategic, operational, and transactional risks in the financial area.
- c) Reviewing Management's assessment of the significant operational, transactional, and strategic risks to achieving Business Plan objectives in the Finance Business Unit and plans to manage, mitigate and monitor the risks.
- 8. Treatment of Complaints
  - a) Establish procedures for the receipt, recording and treatment of complaints received by OPG regarding accounting, internal accounting controls, or auditing matters.
  - b) Establish procedures for the confidential and anonymous submission by OPG employees of concerns regarding accounting or auditing matters.
- 9. Board Policies

The Audit and Finance Committee is accountable for oversight of the following Board policies:

- i. Delegation and Exercise of Authority
- ii. Disclosure

The Committee is responsible for reviewing these Board policies on an annual basis to ensure continuing adequacy of the policies, in addition to receiving at a minimum an annual report from Management compliance with each Board policy. The Committee is also responsible for recommending to the Board the development of any new Board policy it may feel is required in order to fulfill the role and responsibilities of the Committee.

## Annual Review and Assessment

The Committee shall conduct an annual review and assessment of its performance, including a review of its compliance with this Charter, in accordance with the evaluation process approved by the Board.

The Committee shall also review and assess the adequacy of this Charter on an annual basis taking into account all legislative and regulatory requirements applicable to the Committee as well as any best practice guidelines recommended by regulators with whom OPG has a reporting relationship, and if appropriate, shall recommend changes to the Board.

## Composition of the Audit and Finance Committee

As at March 13, 2015, the members of the Audit and Finance Committee were George Lewis (Chair), Elisabeth (Lisa) DeMarco, Ira Kagan, and Peggy Mulligan. All members are independent with experience in business and financial matters. Each member has an understanding of internal controls and procedures for financial reporting. As part of OPG's Continuing Education Program for Directors, Audit and Finance Committee members are provided with access to both internal and external educational resources, including seminars and courses, in order to maintain or improve upon their financial literacy.

## Activities of the Audit and Finance Committee

The Chartered Professional Accountants of Canada (CPA Canada) and the Canadian Public Accountability Board recommended that audit committees perform a comprehensive review of the external audit firm at least once every five years. CPA Canada issued guidelines in early 2014 to help audit committees implement these recommendations. The Audit and Finance Committee conducted its first comprehensive review of its external

auditor, Ernst & Young (E&Y), in 2014 for the period from 2009 to 2013 using the guidelines and format recommended by CPA Canada. E&Y has been OPG's external auditor since OPG's inception in 1999. E&Y provides audit and audit related services to OPG, including the audit of OPG's annual consolidated financial statements, reviews of OPG's quarterly financial statements as well as audits of the financial statements of OPG's consolidated subsidiaries. In conducting the review, the Committee considered input from management, E&Y, and internal audit. The Committee reviewed the information submitted by the three parties, combined with their individual experiences, to evaluate the auditor's performance. The result of this comprehensive review, the Committee considered factors such as the auditors' independence, engagement team quality including its involvement in the selection of E&Y's lead engagement partner, and communication effectiveness between E&Y and the Company. Upon completion of the review, the Committee was satisfied with the performance of E&Y and believed reappointing E&Y is in the best interest of OPG. Therefore, the Committee recommended in November 2014 that the Board of Directors reappoint E&Y for fiscal 2015.

#### **External Auditor Service Fees**

The following Ernst & Young LLP fees were incurred by OPG:

(thousands of dollars)		2014	2013
Audit fees Audit-related fees All other fees <sup>1</sup> Comprised of fees related to the subscription of ar	n online accounting research tool.	2,134 205 15	1,775 188 15
For further information, please contact:	Investor Relations		416-592-6700 1-866-592-6700
			tions@opg.com
	Media Relations		416-592-4008
			1-877-592-4008

www.opg.com

www.sedar.com

## STATEMENT OF MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL INFORMATION

Ontario Power Generation Inc.'s (OPG) management is responsible for the presentation and preparation of the annual consolidated financial statements and Management's Discussion and Analysis (MD&A).

The consolidated financial statements have been prepared in accordance with United States generally accepted accounting principles (US GAAP) and the rules and regulations of the United States Securities and Exchange Commission for annual financial statements. The MD&A has been prepared in accordance with the requirements of securities regulators, including National Instrument 51-102 of the Canadian Securities Administrators and its related published requirements.

The consolidated financial statements and information in the MD&A necessarily include amounts based on informed judgments and estimates of the expected effects of current events and transactions with appropriate consideration to materiality. Something is considered material if it is reasonably expected to have a significant impact on the Company's earnings, cash flow, value of an asset or liability, or reputation. In addition, in preparing the financial information we must interpret the requirements described above, make determinations as to the relevancy of information to be included, and make estimates and assumptions that affect the reported information. The MD&A also includes information regarding the impact of current transactions and events, sources of liquidity and capital resources, operating trends, and risks and uncertainties. Actual results in the future may differ materially from our present assessment of this information because future events and circumstances may not occur as expected.

In meeting our responsibility for the reliability of the financial information, we maintain and rely on a comprehensive system of internal controls and internal audits, including organizational and procedural controls and internal controls over financial reporting. Our system of internal controls includes: written communication of our policies and procedures governing corporate conduct and risk management; comprehensive business planning; effective segregation of duties; delegation of authority and personal accountability; careful selection and training of personnel; and accounting policies, which we regularly update. This structure ensures appropriate internal controls over transactions, assets and records. We also regularly audit internal controls. These controls and audits are designed to provide us with reasonable assurance that the financial records are reliable for preparing financial statements and other financial information, assets are safeguarded against unauthorized use or disposition, liabilities are recognized, and we are in compliance with all regulatory requirements.

Management, including the President and Chief Executive Officer (CEO) and Chief Financial Officer (CFO), is responsible for maintaining disclosure controls and procedures (DC&P) and internal controls over financial reporting (ICOFR). DC&P is designed to provide reasonable assurance that all relevant information is gathered and reported to senior management, including the President and CEO and the CFO, on a timely basis so that appropriate decisions can be made regarding public disclosure. ICOFR is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the consolidated financial statements in accordance with US GAAP.

An evaluation of the effectiveness of the design and operation of OPG's DC&P and ICOFR was conducted as of December 31, 2014. Accordingly, we, as OPG's President and CEO and CFO, will certify OPG's annual disclosure documents filed with the Ontario Securities Commission, which includes attesting to the design and effectiveness of OPG's DC&P and ICOFR.

The Board of Directors, based on recommendations from its Audit and Finance Committee, reviews and approves the consolidated financial statements and the MD&A, and oversees management's responsibilities for the presentation and preparation of financial information, maintenance of appropriate internal controls, management and control of major areas of financial risk, and assessment of significant and related party transactions.

The consolidated financial statements have been audited by Ernst & Young LLP, independent external auditors appointed by the Board of Directors. The Independent Auditors' Report outlines the auditors' responsibilities and the scope of their examination and their opinion on OPG's consolidated financial statements. The independent external auditors, as confirmed by the Audit and Finance Committee, had direct and full access to the Audit and Finance Committee, with and without the presence of management, to discuss their audit and their findings therefrom, as to the integrity of OPG's financial reporting and the effectiveness of the system of internal controls.

Mitchell

**Tom Mitchell** *President and Chief Executive Officer* 

March 13, 2015

Beth Summers Chief Financial Officer

## INDEPENDENT AUDITORS' REPORT

## To the Shareholder of Ontario Power Generation Inc.

We have audited the accompanying consolidated financial statements of Ontario Power Generation Inc., which comprise the consolidated balance sheets as at December 31, 2014 and 2013, and the consolidated statements of income, comprehensive income, cash flows, and changes in shareholder's equity for the years then ended, and a summary of significant accounting policies and other explanatory information.

## Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with United States generally accepted accounting principles, and for such internal controls as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

## Auditors' Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditors consider internal controls relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal controls. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained in our audits is sufficient and appropriate to provide a basis for our audit opinion.

## Opinion

In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of Ontario Power Generation Inc. as at December 31, 2014 and 2013 and the results of its operations and its cash flows for the years then ended in accordance with United States generally accepted accounting principles.

Toronto, Canada March 13, 2015

Crost + young LLP

Ernst & Young LLP

Chartered Professional Accountants, Licensed Public Accountants

# **CONSOLIDATED STATEMENTS OF INCOME**

Years Ended December 31		
(millions of dollars except where noted)	2014	2013
Poversus (Noto 16)	4.062	4.000
Revenue (Note 16) Fuel expense (Note 16)	4,963 641	4,863 708
Gross margin (Note 16)	4,322	4,155
Gross margin (Note 10)	4,522	4,135
Expenses (Note 16)		
Operations, maintenance and administration	2,615	2,747
Depreciation and amortization (Note 4)	754	963
Accretion on fixed asset removal and nuclear waste management liabilities (Note 8)	797	756
Earnings on nuclear fixed asset removal and nuclear waste management funds (Note 8)	(714)	(628)
Regulatory disallowance related to the Niagara Tunnel project (Note 3)	77	
Income from investments subject to significant influence	(41)	(35)
Property taxes	32	53
Restructuring (Note 21)	18	50
	3,538	3,906
Income before other income, interest, income taxes, and extraordinary item	784	249
Other income	(3)	(3)
		(*)
Income before interest, income taxes, and extraordinary item	787	252
Net interest expense (Note 7)	80	86
Income before income taxes and extraordinary item	707	166
Income tax expense (Note 9)	139	31
Income before extraordinary item	568	105
Extraordinary item <sup>1</sup> (Note 3)	243	135
	245	
Net income	811	135
Net income attributable to the Shareholder	804	135
Net income attributable to non-controlling interests	7	-
Pasis and diluted not income new common chara	2.40	0.50
Basic and diluted net income per common share	2.19	0.53
before extraordinary item (dollars) Extraordinary item per common share (dollars)	0.95	
Basic and diluted net income per common share (dollars)	3.14	-
Dasic and undred her moone per continuit State (dollars)	3.14	0.53
Common shares outstanding (millions)	256.3	256.3
sommon shares outstanding (minions)	200.0	200.3

<sup>1</sup> Wholly attributable to the Shareholder.

## CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

Years Ended December 31		
(millions of dollars)	2014	2013
Net income	811	135
Other comprehensive income, net of income taxes (Note 10)		
Recognition of initial pension and other post-employment benefits regulatory asset related to facilities prescribed for rate regulation beginning in 2014 ( <i>Note 3</i> ) <sup>1</sup>	184	-
Actuarial (loss) gain and past service credits on re-measurement of liabilities for pension and other post-employment benefits <sup>2</sup>	(35)	226
Reclassification to income of amounts related to pension and other post-employment benefits <sup>3</sup>	27	42
Net (loss) gain on derivatives designated as cash flow hedges <sup>4</sup>	(2)	14
Reclassification to income of losses on derivatives designated as cash flow hedges <sup>5</sup>	14	13
Other comprehensive income	188	295
Comprehensive income	999	430
Comprehensive income attributable to the Shareholder	992	430
Comprehensive income attributable to non-controlling interests	7	+50

<sup>1</sup> Net of income tax expenses of \$61 million and nil for 2014 and 2013, respectively.

<sup>2</sup> Net of income tax recoveries of \$12 million and expenses of \$75 million for 2014 and 2013, respectively.

<sup>3</sup> Net of income tax expenses of \$10 million and \$15 million for 2014 and 2013, respectively.

<sup>4</sup> Net of income tax recoveries of \$1 million and expenses of \$3 million for 2014 and 2013, respectively.

<sup>5</sup> Net of income tax expenses of \$2 million and \$2 million for 2014 and 2013, respectively.

## **CONSOLIDATED STATEMENTS OF CASH FLOWS**

Years Ended December 31		
(millions of dollars)	2014	2013
Operating activities		
Operating activities Net income	811	125
	011	135
Adjust for non-cash items:	754	060
Depreciation and amortization ( <i>Note 4</i> )	754 797	963
Accretion on fixed asset removal and nuclear waste management liabilities (Note 8)		756
Earnings on nuclear fixed asset removal and nuclear waste management funds (Note 8)	(714)	(628)
Pension and other post-employment benefit costs (Note 11)	460	455
Extraordinary item (Note 3)	(243)	-
Deferred income taxes and other accrued charges	56	(3)
Provision for restructuring (Note 21)	12	50
Mark-to-market on derivative instruments	(52)	39
Provision for used nuclear fuel and low and intermediate level waste (Note 8)	116	109
Regulatory assets and liabilities	(104)	(232)
Provision for materials and supplies	38	43
Regulatory disallowance related to the Niagara Tunnel project (Note 3)	77	-
Other	(14)	(15)
	1,994	1,672
Contributions to nuclear fixed asset removal and nuclear waste	(139)	(184)
management funds (Note 8)		. ,
Expenditures on fixed asset removal and nuclear waste	(212)	(199)
management (Note 8)	77	75
Reimbursement of expenditures on nuclear fixed asset removal and nuclear waste management (Note 8)	77	75
Contributions to pension funds and expenditures on other	(473)	(407)
post-employment benefits and supplementary pension plans (Note 11)		
Expenditures on restructuring (Note 21)	(35)	(13)
Net changes to other long-term assets and liabilities	9	(9)
Net changes to non-cash working capital balances (Note 17)	212	239
Cash flow provided by operating activities	1,433	1,174
nvesting activities		
nvestment in property, plant and equipment and intangible assets (Notes 4 and 16)	(1,545)	(1,568)
Cash flow used in investing activities	(1,545)	(1,568)
inancing activities		
ssuance of long-term debt (Note 6)	200	515
Repayment of long-term debt (Note 6)	(3)	(4)
Distribution paid to non-controlling interests	(5)	()
ssuance of short-term notes (Note 7)	3,332	914
Repayment of short-term notes (Note 7)	(3,364)	(882)
Cash flow provided by financing activities	160	543
······································		0.0
Net increase in cash and cash equivalents	48	149
Cash and cash equivalents, beginning of year	562	413
Cash and cash equivalents, end of year	610	562

## **CONSOLIDATED BALANCE SHEETS**

As at December 31	2014	0040
(millions of dollars)	2014	2013
Assets		
Current assets		
Cash and cash equivalents	610	562
Receivables from related parties (Note 18)	482	402
Other accounts receivable and prepaid expenses	136	148
Nuclear fixed asset removal and nuclear waste management funds (Notes 8 and 16)	25	25
Fuel inventory (Note 16)	334	390
Materials and supplies (Note 16)	94	95
Regulatory assets (Note 5)	167	306
Income taxes recoverable	-	51
Deferred income taxes (Note 9)	8	
	1,856	1,979
Property, plant and equipment (Notes 4, 15, and 16)	25,859	24,441
Less: accumulated depreciation	8,266	7,703
	17,593	16,738
	,	. 0,1 00
Intangible assets (Notes 4 and 16)	432	402
Less: accumulated amortization	356	343
	76	59
Other assets		
Nuclear fixed asset removal and nuclear waste management	14.254	10 171
funds (Notes 8 and 16)	14,354 338	13,471
Long-term materials and supplies (Note 16)		330
Regulatory assets (Note 5)	7,024 348	5,094
Investments subject to significant influence (Note 19)	348 64	359 61
Other long-term assets	22,128	19,315
	22,120	19,315
	41,653	38,091

## **CONSOLIDATED BALANCE SHEETS**

As at December 31 (millions of dollars)	2014	2013
Liabilities		
Current liabilities		
Accounts payable and accrued charges (Note 18)	1,151	1,026
Short-term debt (Note 7)	-	32
Deferred revenue due within one year	12	12
Deferred income taxes (Note 9)	-	14
Long-term debt due within one year (Note 6)	503	5
Income taxes payable	24	-
Regulatory liabilities (Note 5)	5	16
	1,695	1,105
Long-term debt (Note 6)	5,227	5,620
Other liabilities		
Fixed asset removal and nuclear waste management	17,028	16,257
liabilities (Notes 8 and 16)		
Pension liabilities (Note 11)	3,570	2,741
Other post-employment benefit liabilities (Note 11)	3,050	2,628
Long-term accounts payable and accrued charges	529	653
Deferred revenue	212	180
Deferred income taxes (Note 9)	836	565
Regulatory liabilities (Note 5)	39	8
	25,264	23,032
Equity Common shares (Note 14) <sup>1</sup>	5,126	F 106
	4,696	5,126
Retained earnings Accumulated other comprehensive loss (Note 10)	4,696 (496)	3,892 (684)
Equity attributable to the Shareholder	9,326	1 1
בקטונץ מנוווסטנמטופ נט נוופ סוומופווטוטפו	5,520	8,334
Equity attributable to non-controlling interests (Note 22)	141	
Total equity	9,467	8,334
- · ·		
	41,653	38,091

<sup>1</sup> 256,300,010 common shares outstanding at a stated value of \$5,126 million as at December 31, 2014 and 2013.

Commitments and Contingencies (Notes 6, 9, 11, 12, and 15)

See accompanying notes to the consolidated financial statements

On behalf of the Board of Directors:

Berenso loro

Bernard Lord Chairman

14.5-

M. George Lewis Director

# CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDER'S EQUITY

Years Ended December 31		
(millions of dollars)	2014	2013
Common shares (Note 14)	5,126	5,126
Retained earnings		
Balance at beginning of year	3,892	3,757
Net income attributable to the Shareholder	804	135
Balance, end of year	4,696	3,892
Accumulated other comprehensive loss, net of income taxes		
Balance at beginning of year	(684)	(979)
Other comprehensive income	188	295
Balance, end of year	(496)	(684)
Equity attributable to the Shareholder	9,326	8,334
Equity attributable to non-controlling interests (Note 22)		
Balance at beginning of year	-	-
Equity contribution from non-controlling interests	141	-
Distribution to non-controlling interests	(7)	-
Net income attributable to non-controlling interests	7	-
Balance, end of year	141	-
Total equity	9,467	8,334

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the years ended December 31, 2014 and 2013

#### 1. DESCRIPTION OF BUSINESS

Ontario Power Generation Inc. (OPG or the Company) was incorporated on December 1, 1998 pursuant to the *Business Corporations Act* (Ontario) and is wholly owned by the Province of Ontario (the Province and Shareholder). OPG is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario. OPG's mission is to be Ontario's low cost electricity generator through a focus on three corporate strategies: operational excellence, project excellence, and financial sustainability.

#### 2. BASIS OF PRESENTATION

These consolidated financial statements have been prepared and presented in accordance with United States generally accepted accounting principles (US GAAP) and the rules and regulations of the United States Securities and Exchange Commission for annual financial statements, as required by *Ontario Regulation 395/11*, as amended, a regulation under the *Financial Administration Act* (Ontario) effective January 1, 2012.

During the first quarter of 2014, OPG received exemptive relief from the Ontario Securities Commission (OSC) requirements of section 3.2 of National Instrument 52-107 *Acceptable Accounting Policies and Auditing Standards*. The exemption allows OPG to file consolidated financial statements based on US GAAP without becoming a Securities and Exchange Commission registrant, or issuing public debt. The exemption will terminate on the earliest of the following:

- January 1, 2019
- The financial year that commences after OPG ceases to have activities subject to rate regulation
- The effective date prescribed by the International Accounting Standards Board for the mandatory application of a standard within International Financial Reporting Standards specific to entities with rate-regulated activities.

All dollar amounts are presented in Canadian dollars, except in tabular format where noted. Certain of the 2013 comparative amounts have been reclassified from financial statements previously presented to conform to the 2014 consolidated financial statement presentation.

#### 3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

#### Consolidation

The consolidated financial statements of the Company include the accounts of OPG and its majority-owned subsidiaries, and a variable interest entity (VIE) where OPG is the primary beneficiary. All significant intercompany balances and intercompany transactions have been eliminated on consolidation.

Where OPG does not control an investment, but has significant influence over operating and financing policies of the investee, the investment is accounted for under the equity method. OPG co-owns the Portlands Energy Centre (PEC) gas-fired combined cycle generating station with TransCanada Energy Ltd. and co-owns the Brighton Beach gas-fired combined cycle generating station with ATCO Power Canada Ltd. OPG accounts for its 50 percent ownership interest in each of these jointly controlled entities under the equity method.

## Variable Interest Entities

OPG performs ongoing analysis to assess whether it holds any variable interest entities (VIEs). VIEs of which OPG is deemed to be the primary beneficiary are consolidated. The primary beneficiary of a VIE has both the power to direct the activities of the entity that most significantly impact its economic performance and the obligation to absorb losses of the entity that could potentially be significant to the Company. In circumstances where OPG is not deemed to be the primary beneficiary, the VIE is not recorded in OPG's consolidated financial statements.

In 2002, OPG and other Canadian nuclear waste producers established the Nuclear Waste Management Organization (NWMO) in accordance with the *Nuclear Fuel Waste Act* (NFWA). The primary long-term mandate of the NWMO is to implement an approach to address the long-term management of used nuclear fuel. In addition to the above mandate, the NWMO provides project management services for OPG's Deep Geologic Repository project for Low and Intermediate Level Waste (L&ILW) and other nuclear lifecycle liability management services. OPG has the majority of voting rights at the Board of Directors' and members' level. In addition, the NFWA requires the nuclear fuel waste owners to establish and make payments into trust funds for the purpose of funding the implementation of the long-term management plan. OPG currently provides approximately 90 percent of NWMO's funding, primarily towards the Adaptive Phased Management plan for the long-term management of nuclear used fuel. As a result, OPG is expected to absorb a majority of the NWMO's expected losses through future funding in the event of any shortfall. Therefore, OPG holds a variable interest in the NWMO, of which it is the primary beneficiary. Accordingly, the applicable amounts in the accounts of the NWMO, after elimination of all significant intercompany transactions, are consolidated.

## **Use of Management Estimates**

The preparation of financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the consolidated financial statements, and the reported amounts of revenues and expenses during the reporting periods. Management evaluates the Company's estimates on an ongoing basis based upon historical experience, current conditions, and assumptions believed to be reasonable at the time the assumption is made, with any adjustments recognized in the period incurred. Significant estimates are included in the determination of pension and other post-employment benefits (OPEB), asset retirement obligations (AROs), income taxes (including deferred income taxes), contingencies, regulatory assets and liabilities, valuation of derivative instruments, depreciation and amortization expenses, and inventories. Actual results may differ significantly from these estimates.

## Cash and Cash Equivalents and Short-Term Investments

Cash and cash equivalents include cash on deposit and money market securities with a maturity of less than 90 days on the date of purchase. All other money market securities with a maturity on the date of purchase that is greater than 90 days, but less than one year, are recorded as short-term investments. These securities are valued at the lower of cost and market.

### Inventories

Inventories, consisting of fuel and materials and supplies, are measured at the lower of cost and market. Cost is determined as weighted average cost for fuel inventory and average cost for materials and supplies.

## Property, Plant and Equipment, Intangible Assets and Depreciation and Amortization

Property, plant and equipment and intangible assets are recorded at cost. Interest costs incurred during construction and development are capitalized as part of the cost of the asset based on the interest rates on OPG's long-term debt.

Depreciation and amortization rates for the various classes of assets are based on their estimated service lives. Any asset removal costs that have not been specifically provided for in current or previous periods are charged to

operations, maintenance and administration (OM&A) expenses. Repairs and maintenance costs are also expensed when incurred.

Property, plant and equipment are depreciated on a straight-line basis except for computers and transport and work equipment. These are mostly depreciated on a declining balance basis. Intangible assets, which include major application software, are amortized on a straight-line basis. As at December 31, 2014, the amortization periods of property, plant and equipment and intangible assets are as follows:

Nuclear generating stations and major components	15 to 59 years <sup>1</sup>
Thermal generating stations and major components	25 to 50 years
Hydroelectric generating stations and major components	10 to 100 years
Administration and service facilities	10 to 50 years
Computers, and transport and work equipment assets – declining balance	9% to 40% per year
Major application software	5 years
Service equipment	5 to 10 years

<sup>1</sup> As at December 31, 2014, the end of station life for depreciation purposes for the Darlington, Pickering, and Bruce A and B nuclear generating stations ranges between 2019 and 2051. Major components are depreciated over the lesser of the station life and the life of the components.

#### **Asset Impairment**

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The review is based on the presence of impairment indicators such as the future economic benefit of the assets and external market conditions. The net carrying amount of assets is considered impaired if it exceeds the sum of the estimated undiscounted cash flows expected to result from the asset's use and eventual disposition. In cases where the sum of the undiscounted expected future cash flows is less than the carrying amount, an impairment loss is recognized. This loss equals the amount by which the carrying amount exceeds the fair value. Fair value is determined using expected discounted cash flows when quoted market prices are not available. The impairment is recognized in income in the period in which it is identified.

The carrying value of investments accounted for under the equity method are reviewed annually for the presence of any indicators of impairment. If an impairment exists and is determined to be other-than-temporary, an impairment charge is recognized. This charge equals the amount by which the carrying value exceeds the investment's fair value.

#### **Rate Regulated Accounting**

The Ontario Energy Board Act, 1998 and Ontario Regulation 53/05 provide that OPG receives regulated prices for electricity generated from the following facilities that are prescribed for rate regulation: the Sir Adam Beck 1, 2 and Pump generating station, DeCew Falls 1 and 2, and R.H. Saunders hydroelectric facilities, the Pickering and Darlington nuclear facilities, and 48 previously unregulated hydroelectric generating facilities that were prescribed for rate regulation beginning in 2014 pursuant to a November 2013 amendment to Ontario Regulation 53/05. OPG's regulated prices for these facilities are determined by the Ontario Energy Board (OEB).

The OEB is a self-funding Crown corporation. Its mandate and authority come from the *Ontario Energy Board Act*, *1998*, the *Electricity Act*, *1998*, and a number of other provincial statutes. The OEB is an independent, quasi-judicial tribunal that reports to the Legislature of the Province through the Minister of Energy. It regulates market participants in Ontario's natural gas and electricity industries. The OEB carries out its regulatory functions through public hearings and other more informal processes, such as consultations.

US GAAP recognizes that rate regulation can create economic benefits and obligations that are required by the regulator to be obtained from, or settled with, the ratepayers. When the Company assesses that there is sufficient assurance that incurred costs in respect of the regulated facilities will be recovered in the future, those costs are deferred and reported as a regulatory asset. When the Company is required to refund amounts to ratepayers in the

future in respect of the regulated facilities, including amounts related to costs that have not been incurred and for which the OEB has provided recovery through regulated prices, the Company records a regulatory liability.

Certain of the regulatory assets and liabilities recognized by the Company relate to variance and deferral accounts authorized by the OEB, including those authorized pursuant to *Ontario Regulation 53/05*. These accounts typically capture differences between actual costs and revenues and the corresponding forecast amounts approved in the setting of the regulated prices, or record the impact of items not reflected in approved regulated prices. The measurement of these regulatory assets and liabilities is subject to certain estimates and assumptions, including assumptions made in the interpretation of *Ontario Regulation 53/05* and the OEB's decisions. The estimates and assumptions made in the interpretation of the regulation and the OEB's decisions are reviewed as part of the OEB's regulatory process.

Regulatory assets and liabilities for variance and deferral account balances approved by the OEB for inclusion in regulated prices are amortized based on approved recovery or repayment periods. Disallowed balances, including associated interest, are charged to operations in the period that the OEB's decision is issued. Interest is applied to regulatory balances as prescribed by the OEB, in order to recognize the cost of financing amounts to be recovered from, or repaid to, ratepayers.

Regulatory assets and liabilities for variance and deferral account balances approved by the OEB are classified as current if they are expected to be recovered from, or refunded to, ratepayers within 12 months of the end of the reporting period, based on recovery or repayment periods established by the OEB. All other regulatory asset and liability balances are classified as long-term on the consolidated balance sheets.

In addition to regulatory assets and liabilities for variance and deferral accounts, OPG recognizes regulatory assets and liabilities for unamortized amounts recorded in accumulated other comprehensive income (AOCI) in respect of pension and OPEB obligations, and deferred income taxes, in order to reflect the expected recovery or repayment of these amounts in respect of the regulated operations through future regulated prices charged to customers. There are measurement uncertainties related to these balances due to the assumptions made in the determination of pension and OPEB obligations and deferred income taxes attributed to the regulated facilities.

The regulatory asset for unamortized pension and OPEB amounts recorded in AOCI has reflected the OEB's use, since April 1, 2008, of the accrual basis of accounting for including pension and OPEB amounts in approved regulated prices. This is also the manner in which these costs are recognized in OPG's consolidated financial statements. Therefore, unamortized amounts in respect of OPG's pension and OPEB plans that are recognized in AOCI generally have not been reflected in the regulated prices until they have been reclassified from AOCI and recognized as amortization components of the benefit costs for these plans. The regulatory asset is reversed as underlying unamortized balances are amortized as components of the benefit cost.

In setting new regulated prices effective November 1, 2014, the OEB limited amounts for pension and OPEB allowed in the approved revenue requirements to OPG's cash expenditures on its pension and OPEB plans for the regulated business. It is the Company's position that this decision by the OEB does not constitute a change in the basis of OPG's recovery of pension and OPEB costs. This position is based on the OEB's establishment of the Pension & OPEB Cash Versus Accrual Differential Deferral Account which, effective November 1, 2014, records the difference between OPG's actual pension and OPEB costs for the regulated business determined on an accrual basis and the corresponding actual cash expenditures for these plans, the OEB's expectation in the November 2014 decision that a transition to a cash basis of recovery for OPG, if required, would be addressed in a future OPG rate proceeding, and the OEB's intention to hold a generic hearing on the regulatory treatment and recovery of pension and OPEB costs. Accordingly, the Company continues to believe that there is sufficient likelihood that unamortized pension and OPEB amounts that have not yet been reclassified from AOCI will be included in future regulated prices as they are recognized in benefit costs. Therefore, the Company has continued to recognize a regulatory asset for these unamortized amounts. If, in a future proceeding, the OEB decides that the recovery basis for pension and OPEB

amounts should be changed, OPG may be required to adjust the regulatory assets for unamortized pension and OPEB amounts recorded in AOCI and the Pension & OPEB Cash Versus Accrual Differential Deferral Account.

See Notes 5, 8, 9, and 11 to these consolidated financial statements for additional disclosures related to the OEB's decisions, regulatory assets and liabilities, and rate regulated accounting.

#### Fixed Asset Removal and Nuclear Waste Management Liabilities

OPG recognizes AROs for fixed asset removal and nuclear waste management, discounted for the time value of money. OPG estimates both the amount and timing of future cash expenditures based on current plans for fixed asset removal and nuclear waste management. The liabilities are initially recorded at their estimated fair value, which is based on a discounted value of the expected costs to be paid.

On an ongoing basis, the liabilities for nuclear fixed asset removal and nuclear waste management (Nuclear Liabilities) are increased by the present value of the incremental cost portion for the nuclear waste generated each year, with the corresponding amounts charged to operating expenses. Variable expenses relating to low and intermediate level nuclear waste are charged to OM&A expenses. Variable expenses relating to the management and storage of nuclear used fuel are charged to fuel expense. The liabilities may also be adjusted due to any changes in the estimated amount or timing of the underlying future cash flows. Upon settlement of the liabilities, a gain or loss would be recorded.

Accretion arises because the nuclear liabilities are reported on a net present value basis. Accretion expense is the increase in the carrying amount of the liabilities due to the passage of time.

The asset retirement cost is capitalized by increasing the carrying value of the related fixed assets. The capitalized cost is depreciated over the remaining service life of the related fixed assets and is included in depreciation and amortization expenses.

#### Nuclear Fixed Asset Removal and Nuclear Waste Management Funds

Pursuant to the Ontario Nuclear Funds Agreement (ONFA) between OPG and the Province, OPG established a Used Fuel Segregated Fund (Used Fuel Fund) and a Decommissioning Segregated Fund (Decommissioning Fund) (together the Nuclear Funds). The Used Fuel Fund is intended to fund expenditures associated with the management of radioactive used nuclear fuel bundles, while the Decommissioning Fund was established to fund expenditures associated with nuclear fixed asset removal, long-term L&ILW management, and certain costs for used fuel storage incurred after the nuclear stations are shut down. OPG maintains the Nuclear Funds in third-party custodial accounts that are segregated from the rest of OPG's assets.

OPG's investments in the Nuclear Funds and the corresponding payable/receivable to/from the Province are classified as held-for-trading. The Nuclear Funds are measured at fair value based on the bid prices of the underlying equity and fixed income securities, and, in the case of the alternative investment portfolio, using appropriate valuation techniques as outlined in Note 13 to these consolidated financial statements, with realized and unrealized gains and losses recognized in OPG's consolidated statements of income.

#### **Revenue Recognition**

All of OPG's electricity generation is offered into the real-time energy spot market administered by the Independent Electricity System Operator (IESO). Revenue is recognized as electricity is generated and metered to the IESO.

Effective January 1, 2015, the Ontario Power Authority (OPA) merged with the IESO. The new entity continued under the name Independent Electricity System Operator (IESO). As such, the IESO is substituted as the counterparty of Energy Supply Agreements (ESA) or other agreements that were previously executed with the OPA.

### Revenue Recognition - Regulated Generation

Energy revenue generated from OPG's regulated facilities is based on regulated prices determined by the OEB that currently include a base regulated price and a rate rider for the recovery or repayment of approved variance and deferral account balances.

The base regulated prices in effect during 2014 and 2013 were determined by the OEB using a two-year forecast cost of service methodology based on revenue requirements, taking into account a forecast of production and operating costs for the regulated facilities and a return on rate base. Rate base is a regulatory construct that represents the average net level of investment in regulated fixed and intangible assets and an allowance for working capital. The revenues from the regulated hydroelectric facilities are also subject to the OEB-approved hydroelectric incentive mechanism. The mechanism provides a pricing incentive to OPG to shift hydroelectric production from lower market price periods to higher market price periods, reducing the overall costs to ratepayers.

The rate riders in effect during 2014 and 2013 were established by the OEB following its March 2013 decision approving a settlement agreement between OPG and intervenors on OPG's application to recover or repay balances in most of the OEB-authorized regulatory variance and deferral accounts as at December 31, 2012. The OEB-authorized variance and deferral accounts are discussed in Note 5 to these consolidated financial statements.

## Revenue Recognition - Unregulated Generation and Other Revenue

The electricity generation from OPG's unregulated assets received the Ontario electricity spot market price, except where an ESA with the IESO or a cost recovery agreement is in place. As at December 31, 2014, virtually all of OPG's operating unregulated assets are subject to an ESA. Revenue generated by generating stations subject to a cost recovery agreement or an ESA is recognized in accordance with the terms of the agreement or contract.

OPG also sells into, and purchases from, interconnected markets of other provinces and the United States (US) northeast and midwest. All contracts that are not designated as hedges are recorded in the consolidated balance sheets at market value, with gains or losses recorded in the consolidated statements of income. Gains and losses on energy trading contracts (including those to be physically settled) are recorded on a net basis in the consolidated statements of income. Accordingly, power purchases of \$131 million were netted against revenue in 2014 (2013 – \$94 million).

OPG derives non-energy revenue under the terms of a lease arrangement and associated agreements with Bruce Power L.P. related to the Bruce nuclear generating stations. This includes lease revenue and revenue from heavy water sales and detribution services. The benefit of OPG's net revenues from the lease of the Bruce stations and related agreements, including a portion of heavy water sales, are credited to ratepayers, as it reduces the regulated price of the generation of the nuclear facilities owned and operated by OPG. The minimum lease payments are recognized in revenue on a straight-line basis over the term of the lease.

In addition, non-energy revenue includes isotope sales, real estate rentals and other service revenues. Revenues from these activities are recognized as services are provided, or as products are delivered.

## Derivatives

All derivatives, including embedded derivatives that must be separately accounted for, generally are classified as held-for-trading and recorded at fair value in the consolidated balance sheets. Transaction costs are expensed as incurred for financial instruments classified or designated as held-for-trading.

Derivatives qualify for hedge accounting if they meet stringent documentation requirements and the derivative instrument that is designated as a hedge is expected to effectively hedge the identified risk throughout the life of the hedged item. At the inception of a hedging relationship, OPG documents the relationship between the hedging instrument and the hedged item, its risk management objective, and its strategy for undertaking the hedge. A documented assessment is made, both at the inception of a hedge and on an ongoing basis, of whether or not the

derivatives that are used in hedging transactions are highly effective in offsetting the changes attributable to the hedged risks in the fair values or cash flows of the hedged items.

All derivative contracts not designated as hedges are recorded on the consolidated balance sheets as derivative assets or liabilities at fair value with changes in fair value recorded in the revenue of the Services, Trading, and Other Non-Generation segment. Refer to Note 12 for a discussion of OPG's risks and the derivative instruments used to manage the risks.

#### **Fair Value Measurements**

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly arm's-length transaction between market participants at the measurement date. Fair value measurements are required to reflect the assumptions that market participants would use in pricing an asset or liability based on the best available information. These assumptions include the risks inherent in a particular valuation technique, such as a pricing model, and the risks inherent in the inputs to the model. OPG uses a fair value hierarchy, grouping assets and liabilities into three levels based on the relative objectivity of the inputs used to measure fair value, with Level 1 representing the most objective. Refer to Note 13 for a discussion of fair value measurements and the fair value hierarchy.

#### **Research and Development**

Research and development costs are expensed in the year incurred. Research and development costs incurred to discharge long-term obligations, such as the nuclear waste management liabilities, for which specific provisions have already been made, are charged to the related liability.

#### Leases

Leases are evaluated and classified as either operating or capital leases for financial reporting purposes. Capital leases, which transfer substantially all of the risks and benefits incidental to ownership of the leased item, are capitalized at the inception of the lease at the fair value of the leased property or, if lower, at the present value of the minimum lease payments. Capital leases are depreciated over the shorter of the estimated useful life of the asset or the lease term.

Leases where the lessor retains substantially all the risks and benefits incidental to ownership of the asset are classified as operating leases. Operating lease payments, other than contingent rentals, are recognized as an expense in the consolidated statements of income on a straight-line basis over the lease term. Where the amount of rent expense recognized is different from the actual operating lease payment, other than contingent rentals, the difference is deferred and included as assets or liabilities on the consolidated balance sheets.

#### **Pension and Other Post-Employment Benefits**

OPG's post-employment benefit programs consist of a contributory defined benefit registered pension plan, a defined benefit supplementary pension plan, and other post-retirement benefits (OPRB) including group life insurance and health care benefits, and long-term disability (LTD) benefits. Post-employment benefit programs are also provided by the NWMO, which is consolidated into OPG's financial results. Information on the Company's post-employment benefit programs is presented on a consolidated basis.

OPG accrues its obligations under pension and OPEB plans in accordance with US GAAP. The obligations for pension and OPRB are determined using the projected benefit method pro-rated on service. The obligation for LTD benefits is determined using the projected benefit method on a terminal basis. Pension and OPEB obligations are impacted by factors including interest rates, adjustments arising from plan amendments, changes in demographic assumptions, experience gains or losses, salary levels, inflation, and cost escalation. Pension and OPEB costs and obligations are determined annually by independent actuaries using management's best estimate assumptions.

Assumptions are significant inputs to actuarial models that measure pension and OPEB obligations and related effects on operations. Two critical assumptions – discount rate and inflation – are important elements in the determination of benefit costs and obligations. In addition, the expected return on plan assets is a critical assumption in the determination of registered pension plan costs. These assumptions, as well as other assumptions involving demographic factors such as retirement age, mortality, and employee turnover, are evaluated periodically by management in consultation with independent actuaries. During the evaluation process, the assumptions are updated to reflect past experience and expectations for the future. Actual results in any given year will often differ from actuarial assumptions because of economic and other factors. In accordance with US GAAP, for pension and OPRB, the impact of these updates and differences on the respective benefit obligations is accumulated and amortized over future periods; for LTD benefits, the impact of these updates and differences is immediately recognized as OPEB costs in the period incurred.

The discount rates, which are representative of AA corporate bond yields, are used to calculate the present value of the expected future cash flows on the measurement date to determine the projected benefit obligations for the Company's employee benefit plans. A lower discount rate increases the benefit obligations and increases benefit costs. The expected rate of return on plan assets is based on the pension fund's asset allocation, as well as the expected return considering long-term historical risks and returns associated with each asset class within the plan portfolio. A lower expected rate of return on plan assets increases pension cost.

Pension fund assets include equity securities, corporate and government debt securities, pooled funds, real estate, infrastructure, and other investments. These assets are managed by professional investment managers. The pension fund does not invest in equity or debt securities issued by OPG. Pension fund assets are valued using market-related values for purposes of determining the amortization of actuarial gains or losses and the expected return on plan assets. The market-related value recognizes gains and losses on equity assets relative to a six percent assumed real return over a five-year period.

Pension and OPEB costs include current service costs, interest costs on the obligations, the expected return on pension plan assets, adjustments for plan amendments and adjustments for actuarial gains or losses, which result from changes in assumptions and experience gains and losses. Past service costs or credits arising from pension and OPRB plan amendments are amortized on a straight-line basis over the expected average remaining service life to full eligibility of the employees covered by the plan. Past service costs or credits arising from amendments to LTD benefits are immediately recognized as OPEB costs in the period incurred. Due to the long-term nature of pension and OPRB liabilities, the excess of the net cumulative unamortized gain or loss, over 10 percent of the greater of the benefit obligation and the market-related value of the plan assets (corridor), is amortized over the expected average remaining service life of the employees since OPG expects to realize the associated economic benefit over that period. Actuarial gains or losses for LTD benefits are immediately recognized as OPEB costs to realize the associated economic benefit out that period.

OPG recognizes on its consolidated balance sheets the funded status of its defined benefit plans. The funded status is measured as the difference between the fair value of plan assets and the benefit obligation on a plan-by-plan basis.

Actuarial gains or losses and past service costs or credits that arise during the year and are not recognized immediately as components of benefit costs are recognized as increases or decreases in other comprehensive income (OCI), net of income taxes. These unamortized amounts in AOCI are subsequently reclassified and recognized as components of pension and OPRB costs as discussed above.

OPG records an offsetting regulatory asset or liability for the portion of the adjustments to AOCI that is attributable to regulated operations in order to reflect the expected recovery or refund of these amounts through future regulated prices charged to customers. For the recoverable or refundable portion attributable to regulated operations, OPG records a corresponding change in this regulatory asset or liability for the amount of the increases or decreases in OCI and for the reclassification of AOCI amounts into benefit costs during the period.

When the recognition of the transfer of employees and employee-related benefits gives rise to both a curtailment and a settlement, the curtailment is accounted for prior to the settlement. A curtailment is the loss by employees of the right to earn future benefits under the plan. A settlement is the discharge of a plan's liability.

## **Income Taxes and Investment Tax Credits**

OPG is exempt from income tax under the *Income Tax Act* (Canada). However, under the *Electricity Act, 1998*, OPG is required to make payments in lieu of corporate income taxes to the Ontario Electricity Financial Corporation (OEFC). These payments are calculated in accordance with the *Income Tax Act* (Canada) and the *Taxation Act, 2007* (Ontario), as modified by the *Electricity Act, 1998* and related regulations. This results in OPG effectively paying taxes similar to what would be imposed under the federal and Ontario tax acts.

OPG follows the liability method of accounting for income taxes. Under the liability method, deferred income tax assets and liabilities are determined based on differences between the accounting and tax bases of assets and liabilities. Deferred amounts are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. The effect of a change in tax rates on deferred income tax assets and liabilities is included in income in the period the change is enacted.

If management determines that it is more likely than not that some, or all, of a deferred income tax asset will not be realized, a valuation allowance is recorded to report the balance at the amount expected to be realized.

OPG recognizes deferred income taxes associated with its regulated operations and records an offsetting regulatory asset or liability for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers.

Tax benefits associated with income tax positions taken, or expected to be taken, in a tax return and investment tax credits are recorded only when the more likely than not recognition threshold is satisfied. Tax benefits and investment tax credits recognized are measured at the largest amount of benefit that is greater than 50 percent likely of being realized upon settlement.

Investment tax credits are recorded as a reduction to income tax expense. OPG classifies interest and penalties associated with unrecognized tax benefits as income tax expense.

## **Changes in Accounting Policies and Estimates**

### Impacts of Regulation of the Newly Regulated Hydroelectric Facilities, and the OEB's 2014 Decision and Order

The OEB's decision on OPG's September 2013 application for new regulated prices for OPG's nuclear and existing regulated hydroelectric generation was issued in November 2014, following a public hearing process. This decision was followed by the OEB's order in December 2014 establishing new regulated prices for these facilities effective November 1, 2014.

The OEB's decision and order also established a regulated price for the generation from the 48 newly regulated hydroelectric facilities. The regulated prices for these facilities are also effective November 1, 2014.

As a result of the rate regulation of these 48 previously unregulated hydroelectric facilities in 2014, OPG recognized regulatory assets related to deferred income taxes, and unamortized amounts recorded in AOCI in respect of pension and OPEB obligations. The increase in the regulatory asset related to deferred income taxes resulted in a net extraordinary gain of \$243 million in the consolidated statement of income for 2014. The increase in regulatory assets related to pension and OPEB obligations resulted in an increase of \$184 million in OCI, net of \$61 million in income taxes.

The OEB's decision and order approved a \$1,365 million addition to regulated rate base due to the completion and in-service addition of the Niagara Tunnel project in March 2013. The approved rate base amount is lower than the

cost of the asset. Under Accounting Standards Codification (ASC) Topic 980 *Regulated Operations*, disallowances by a regulator on recently completed assets are generally required to be written off during the period when the regulator's decision is issued. As such, the OEB's cost disallowance on the Niagara Tunnel project resulted in a write-off of costs of \$77 million in 2014, including \$1 million of expected project close out costs. In December 2014, OPG filed a motion asking the OEB to review and vary certain parts of its decision, including the disallowance of the Niagara Tunnel expenditures.

#### **Investment Companies**

For reporting periods beginning January 1, 2014, OPG adopted the updates to ASC Topic 946, *Investment Companies*. Based on the amended scope of the standard, OPG concluded that OPG Ventures Inc., the Decommissioning Fund, the Used Fuel Fund and the Ontario NFWA Trust should be treated as investment entities for accounting purposes. As the investments of these entities are already recorded at fair value, there were no measurement differences upon adoption of this update. Additional disclosures required under ASC Topic 946 are provided in Note 8.

#### Pension and Other Post-Employment Benefits

The weighted average discount rate used to determine the projected pension benefit obligations and the projected benefit obligations for OPEB as at December 31, 2014 was 4.0 percent. This represents a decrease, compared to the 4.9 percent discount rate that was used to determine the obligations as at December 31, 2013.

The deficit for the registered pension plans increased from \$2,461 million as at December 31, 2013 to \$3,262 million as at December 31, 2014 largely as a result of the decrease in the discount rates at 2014 year end, partially offset by the favourable return on pension fund assets in 2014.

The projected benefit obligations for OPEB increased from \$2,719 million at December 31, 2013 to \$3,143 million as at December 31, 2014. This increase in the obligation was largely due to the decrease in the discount rates.

As at December 31, 2014, the unamortized net actuarial loss and unamortized past service costs for the pension and OPEB plans totalled \$4,869 million (2013 – \$3,899 million). Details of the unamortized net actuarial loss and unamortized past service costs at December 31, 2014 and 2013 are as follows:

	Regis Pensio		Suppler Pensio		Other Emplo Bene	yment
(millions of dollars)	2014	2013	2014	2013	2014	2013
Net actuarial gain not yet subject to amortization due to use of market-related values	(878)	(886)	-	-	-	-
Net actuarial loss not subject to amortization due to use of the corridor	1,568	1,339	32	29	288	245
Net actuarial loss subject to amortization	3,443	3,043	65	50	350	78
Unamortized net actuarial loss	4,133	3,496	97	79	638	323
Unamortized past service costs	_	-	-	-	1	1

A change in assumptions, holding all other assumptions constant, would increase (decrease) 2014 costs as follows:

(millions of dollars)	Registered Pension Plans <sup>1</sup>	Supplementary Pension Plans <sup>1</sup>	Other Post- Employment Benefits <sup>1</sup>
Expected long-term rate of return			
0.25% increase	(25)	n/a	n/a
0.25% decrease	25	n/a	n/a
Discount rate			
0.25% increase	(51)	(1)	(10)
0.25% decrease	54	1	12
Inflation			
0.25% increase	90	1	1
0.25% decrease	(85)	(1)	(1)
Salary increases			
0.25% increase	20	3	1
0.25% decrease	(20)	(3)	(1)
Health care cost trend rate			
1% increase	n/a	n/a	75
1% decrease	n/a	n/a	(37)

n/a - change in assumption not applicable.

<sup>1</sup> Excludes the impact of regulatory variance and deferral accounts.

#### Recent Accounting Pronouncements

#### Revenue from Contracts with Customers

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update No. 2014-09, *Revenue from Contracts with Customers* (ASU 2014-09), which supersedes nearly all existing revenue recognition guidance, including industry-specific guidance under US GAAP. The core principle of ASU 2014-09 is to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration to which an entity expects to be entitled for those goods or services. ASU 2014-09 defines a five step process to achieve this core principle and, in doing so, more judgement and estimates may be required, compared to the requirements under existing US GAAP. The standard will be effective for OPG's 2017 fiscal year, including interim periods in 2017. In applying the standard, entities would have the option between two retrospective transition methods: (i) a full retrospective approach reflecting the application of the standard in each prior reporting period with the option to elect certain practical expedients, or (ii) a modified retrospective approach with the cumulative effect of initially adopting ASU 2014-09 recognized at the date of adoption and additional disclosures. OPG is currently assessing the impact of this new standard on its consolidated financial statements and has not yet determined the method by which it will adopt the standard in 2017.

### Consolidation

In February 2015, the FASB issued Accounting Standards Update 2015-02, Consolidation (Topic 810): Amendments to the Consolidation Analysis (ASU 2015-02), which incorporates targeted changes to the consolidation guidance for limited partnerships, limited liability corporations and securitization structures. Specifically for OPG, limited partnerships will now be VIEs unless the limited partners hold substantive "kick-out" or participating rights. It is expected that more limited partnerships will therefore be considered VIEs and where OPG is the primary beneficiary; the limited partnerships that are not currently consolidated would be consolidated. The amendments will be effective for OPG's 2016 fiscal year, including interim periods in 2016. OPG is currently assessing the impact of the standard on its consolidated financial statements and has not yet determined the impact of the standard in 2016.

### 4. PROPERTY, PLANT AND EQUIPMENT, INTANGIBLE ASSETS AND DEPRECIATION AND AMORTIZATION

Depreciation and amortization expenses for the years ended December 31 consist of the following:

(millions of dollars)	2014	2013
Depreciation	451	513
Amortization of intangible assets	13	14
Amortization of regulatory assets and liabilities (Note 5)	290	436

Property, plant and equipment as at December 31 consist of the following:

(millions of dollars)	2014	<b>2013</b> (adjusted - Note 16)
Nuclear generating stations	9,313	9,116
Regulated hydroelectric generating stations	9,287	9,296
Contracted generation portfolio generating stations	3,600	2,475
Other property, plant and equipment	1,833	414
Construction in progress	1,826	3,140
	25,859	24,441
Less: accumulated depreciation		
Generating stations	6,771	7,478
Other property, plant and equipment	1,495	225
	8,266	7,703
	17,593	16,738

Construction in progress as at December 31 consists of the following:

(millions of dollars)	2014	2013
Darlington Refurbishment	1,309	658
Atikokan Biomass Conversion	6	144
Lower Mattagami River Project		1,982
Other	511	356
	1,826	3,140

Interest capitalized to construction and development in progress at an average rate of five percent during 2014 (2013 – five percent) was \$135 million (2013 – \$127 million).

Intangible assets as at December 31 consist of the following:

(millions of dollars)	2014	<b>2013</b> (adjusted - Note 16)
Nuclear generating stations	116	114
Regulated hydroelectric generating stations	4	4
Contracted generation portfolio generating stations	5	5
Computer software and other intangible assets	261	257
Development in progress	46	22
	432	402
Less: accumulated amortization		
Generating stations	109	103
Computer software and other intangible assets	247	240
	356	343
	76	59

The estimated aggregate amortization expense for intangible assets currently recognized for each of the five succeeding years is as follows:

(millions of dollars)	2015	2016	2017	2018	2019
Amortization expense	11	8	4	2	-

#### 5. REGULATORY ASSETS AND LIABILITIES

In March 2013, the OEB approved a settlement agreement between OPG and intervenors on all aspects of OPG's application requesting approval to recover or repay balances in most of the authorized variance and deferral accounts as at December 31, 2012 (the Settlement Agreement). In approving the Settlement Agreement, the OEB authorized the disposition of approved balances over periods ranging from two to 12 years beginning on January 1, 2013. In April 2013, the OEB issued an order authorizing OPG to collect \$633 million over the period from January 1, 2013 to December 31, 2014 through rate riders effective during that period. During 2014 and 2013, the Company amortized the regulatory assets and liabilities for the variance and deferral balances approved for disposition based on recovery or repayment periods authorized by the OEB's approval of the Settlement Agreement. Any shortfall or over-recovery of approved balances due to differences between actual and forecast production was recorded in the authorized Nuclear Deferral and Variance Over/Under Recovery Variance Account and Hydroelectric Deferral and Variance Over/Under Recovery Variance Account to be collected from, or refunded to, ratepayers in the future.

The OEB's March 2013 decision and April 2013 order also authorized the continuation of previously existing variance and deferral accounts, including those authorized pursuant to *Ontario Regulation 53/05*. During the period from January 1, 2013 to October 31, 2014, the Company recognized regulatory assets and liabilities for additions recorded in these variance and deferral accounts as authorized by the OEB, relative to the forecast amounts reflected in the cost of service regulated prices then in effect, where applicable.

In November 2014 and December 2014, respectively, the OEB issued its decision and order establishing new regulated prices for OPG's regulated generation effective November 1, 2014. The OEB's decision and order approved the recovery or repayment of the balances in four variance accounts as at December 31, 2013 totalling \$189 million, without adjustments. The recovery or repayment was approved for the following accounts: the Hydroelectric Incentive Mechanism Variance Account, the Hydroelectric Surplus Baseload Generation Variance Account, the nuclear capital and hydroelectric portions of the Capacity Refurbishment Variance Account, and the

Nuclear Development Variance Account. The OEB authorized the recovery or repayment of these balances over a 12-month period, through rate riders effective from January 1, 2015 to December 31, 2015.

In its decision and order, the OEB also approved the continuation of previously authorized variance and deferral accounts and, effective November 1, 2014, extended all applicable accounts to the 48 newly regulated hydroelectric facilities. During the period from November 1, 2014 to December 31, 2014, the Company recognized regulatory assets and liabilities for additions recorded in these variance and deferral accounts as authorized by the OEB. During this period, the Company also recognized regulatory assets for additions to the Pension & OPEB Cash Versus Accrual Differential Deferral Account and the Pension & OPEB Cash Payment Variance Account, which were established by the OEB effective November 1, 2014.

During 2014 and 2013, OPG recorded interest on the balances of the variance and deferral accounts as authorized by the OEB. For accounts subject to interest during this period, interest was recorded using the OEB-prescribed interest rate of 1.47 percent per annum.

In December 2014, OPG filed an application with the OEB requesting approval of the December 31, 2014 balances in most of the authorized regulatory variance and deferral accounts. The application requests recovery of these balances through new rate riders beginning on July 1, 2015. The decision on OPG's application will be made by the OEB following a public hearing process, which commenced in the first quarter of 2015.

(millions of dollars)	2014	2013
Regulatory assets		
Variance and deferral accounts authorized by the OEB		
Pension and OPEB Cost Variance Account	939	667
Bruce Lease Net Revenues Variance Account	315	353
Nuclear Liability Deferral Account	286	254
Capacity Refurbishment Variance Account	190	100
Hydroelectric Surplus Baseload Generation Variance Account	67	19
Nuclear Development Variance Account	59	57
Other variance and deferral accounts	111	233
	1,967	1,683
Pension and OPEB Regulatory Asset (Note 11)	4,363	3,158
Deferred Income Taxes (Note 9)	861	559
Total regulatory assets	7,191	5,400
Less: current portion	167	306
Non-current regulatory assets	7,024	5,094
Regulatory liabilities		
Variance and deferral accounts authorized by the OEB		0.4
Other variance and deferral accounts	44	24
Total regulatory liabilities	44	24
Less: current portion	5	16
Non-current regulatory liabilities	39	8

The regulatory assets and liabilities recorded as at December 31 are as follows:

(millions of dollars) Varia	B Lease Ne st Revenues nce Variance		Refurbish -ment Variance	Baseload Generation Variance	Develop- ment Variance	and Deferral (net)	and OPEB Regula- tory Asset	Deferred Income Taxes
Net regulatory assets 324 January 1, 2013	4 311	208	14	4	30	384	4,494	668
Increase (decrease) 402	2 110	123	93	15	26	53	(1,336)	(109)
Interest	(5)	(2)	-	-	1	3	-	-
Amortization (60	0) (63)	(75)	(7)	-	-	(231)	-	-
Net regulatory assets 667 December 31, 2013	7 353	254	100	19	57	209	3,158	559
Increase 312	2 4	82	92	48	1	9	1,205	302
Interest		-	3	-	1	2	-	-
Amortization (4)	0) (42)	(50)	(5)	-	-	(153)	-	-

The changes in the regulatory assets and liabilities during 2014 and 2013 are as follows:

### Pension and OPEB Cost Variance Account

As authorized by the OEB, for the period from March 1, 2011 to October 31, 2014, the Pension and OPEB Cost Variance Account recorded the difference between actual pension and OPEB costs for the regulated business determined on an accrual basis and related tax impacts, and the corresponding amounts reflected in the regulated prices then in effect. In its November 2014 decision, the OEB determined that the pension and OPEB amounts for the regulated business reflected in the new regulated prices effective November 1, 2014 would be limited to OPG's estimated minimum contributions to its registered pension plan and a forecast of OPG's expenditures on the OPEB and supplementary pension plans. As such, the OEB ordered the Pension and OPEB Cost Variance Account to record only amortization beginning on November 1, 2014.

In its March 2013 decision and April 2013 order, the OEB authorized the recovery of 2/12 of the balance in the Pension and OPEB Cost Variance Account as at December 31, 2012 over a 24-month period ending December 31, 2014. The OEB also authorized the recovery of 10/12 of the account balance as at December 31, 2012 over a 144-month period ending December 31, 2024. Accordingly, effective January 1, 2013, OPG recorded amortization of the regulatory asset for the account on a straight-line basis over these periods.

## **Bruce Lease Net Revenues Variance Account**

As per *Ontario Regulation 53/05*, the OEB is required to include the difference between OPG's revenues and costs associated with its ownership of the two nuclear stations on lease to Bruce Power L.P. in the determination of the regulated prices for production from OPG's regulated nuclear facilities. The OEB established a variance account that captures differences between OPG's revenues and costs related to the nuclear generating station on lease to Bruce Power L.P. and the corresponding forecasts included in approved nuclear regulated prices.

In its March 2013 decision and April 2013 order, the OEB ordered the portion of the balance in the Bruce Lease Net Revenues Variance Account as at December 31, 2012 related to the impact of the derivative liability embedded in the Bruce Power lease agreement (Bruce Lease) to be recovered on the basis of OPG's expected rent rebate payments to Bruce Power L.P. and associated income tax impacts. Effective January 1, 2013, OPG recorded amortization of the regulatory asset for this portion of the account on that basis. The non-derivative portion of the balance as at December 31, 2012 was authorized by the OEB to be recovered over a 48-month period ending December 31, 2016. Effective January 1, 2013, OPG recorded amortization of the regulatory asset for the non-derivative portion of the account on a straight-line basis over this period.

#### **Nuclear Liability Deferral Account**

As per Ontario Regulation 53/05, the OEB has authorized the Nuclear Liability Deferral Account (NLDA) in connection with changes to OPG's liabilities for nuclear used fuel management and nuclear decommissioning and L&ILW management associated with the nuclear facilities owned and operated by OPG, which are comprised of the Pickering and Darlington nuclear generating stations. The deferral account records the revenue requirement impact associated with the changes in these liabilities arising from an approved reference plan, in accordance with the terms of the ONFA. During 2012, the Province approved the 2012 ONFA Reference Plan covering the period from 2012 to 2016, with an effective date of January 1, 2012. As the regulated prices in effect prior to November 1, 2014 did not reflect the impact of the 2012 ONFA Reference Plan, OPG recorded an increase to the regulatory asset for the NLDA during the period from January 1, 2012 to October 31, 2014.

Components of the increase in the regulatory asset for the NLDA relating to the above increase in liabilities, with reductions to corresponding expenses for the years ended December 31, 2014 and 2013 are summarized as follows:

(millions of dollars)	2014	2013
Fuel expense	23	26
Low and intermediate level waste management variable expenses <sup>1</sup>	-0	1
	43	52
Depreciation expense Return on rate base <sup>2</sup>	-	2
Interest <sup>3</sup>	-	(2)
Income taxes	15	42
	82	121

<sup>1</sup> Amount was recorded as a reduction to OM&A expenses.

<sup>2</sup> Amount was recorded as a reduction to accretion on fixed asset removal and nuclear waste management liabilities.

<sup>3</sup> Amount in 2013 represents the write-off of interest recorded on the balance of the account as of December 31, 2012, pursuant to the OEB-approved Settlement Agreement.

In its March 2013 decision and April 2013 order, the OEB approved the recovery of a portion of the balance in the NLDA as at December 31, 2012 over a 24-month period ending December 31, 2014. Accordingly, effective January 1, 2013, OPG recorded amortization of the regulatory asset for this account on a straight-line basis over this period. As ordered by the OEB per the terms of the Settlement Agreement, effective January 1, 2013, no interest is recorded on the balance of this account.

#### **Capacity Refurbishment Variance Account**

Pursuant to *Ontario Regulation 53/05*, the OEB has authorized the Capacity Refurbishment Variance Account (CRVA). The account captures variances from forecasts reflected in the regulated prices for capital and non-capital costs incurred to increase the output of, refurbish, or add operating capacity to the regulated facilities. The balance in the account as at December 31, 2014 includes variances related to the Niagara Tunnel project, the refurbishment of the Darlington nuclear generating station, life extension initiatives at the Pickering nuclear generation station, and other projects.

OPG determines amounts to be recovered from, or refunded to, customers with respect to variances in capital costs as the difference from forecast depreciation expense and cost of capital associated with the in-service capital reflected in the regulated prices and associated income tax effects. The cost of capital amount in the account is calculated using the weighted average cost of capital, including a return on equity, as approved by the OEB in determining the regulated prices. In accordance with US GAAP, in recognizing a regulatory asset for the CRVA,

OPG limits the portion of cost of capital additions recognized as a regulatory asset to the amount calculated using the average rate of capitalized interest applied to construction and development in progress.

As the regulated prices in effect prior to November 1, 2014 did not reflect the impact of the Niagara Tunnel declared in-service in March 2013, the CRVA additions for the period from January 1, 2014 to October 31, 2014 included \$116 million (year ended December 31, 2013 – \$114 million) to be recovered from ratepayers related to the Niagara Tunnel. This amount included \$83 million (2013 – \$83 million) for the capital cost component determined using the weighted average cost of capital. OPG recognized an increase of \$89 million in the regulatory asset for the CRVA related to the Niagara Tunnel in 2014 (2013 – \$88 million), of which \$56 million (2013 – \$56 million) represented the capital cost component determined using the average rate of five percent for capitalized interest applied to construction and development in progress for the year ended December 31, 2014 (2013 – five percent).

In its March 2013 decision and April 2013 order, the OEB approved the recovery of the nuclear non-capital cost portion of the account balance as at December 31, 2012 over a 24-month period ending December 31, 2014. Accordingly, effective January 1, 2013, OPG recorded amortization of the regulatory asset for this portion of the account on a straight-line basis over this period. In setting new regulated prices effective November 1, 2014, the OEB approved the recovery of the December 31, 2013 nuclear capital and hydroelectric portions of the account balance, totaling \$119 million, over a 12-month period beginning on January 1, 2015.

### Hydroelectric Surplus Baseload Generation Variance Account

The Hydroelectric Surplus Baseload Generation Variance Account records the impact of foregone production at OPG's regulated hydroelectric facilities due to surplus baseload generation conditions. The variance account was authorized by the OEB, effective March 1, 2011 for the previously regulated hydroelectric facilities. The OEB extended this account to the applicable newly regulated hydroelectric facilities effective November 1, 2014.

In its November 2014 decision and December 2014 order, the OEB approved the recovery of the account balance as at December 31, 2013 over a 12-month period beginning on January 1, 2015.

#### **Nuclear Development Variance Account**

The Nuclear Development Variance Account was established pursuant to *Ontario Regulation 53/05* and records differences between actual non-capital costs incurred by OPG in the course of planning and preparing for the development of proposed new nuclear facilities, and the forecast amount of these costs included in the nuclear regulated prices.

In its November 2014 decision, the OEB approved the recovery of the account balance as at December 31, 2013 over a 12-month period beginning on January 1, 2015.

#### **Other Variance and Deferral Accounts**

As at December 31, 2014 and 2013, regulatory assets for other variance and deferral accounts included amounts for the Nuclear Deferral and Variance Over/Under Recovery Variance Account and the Hydroelectric Deferral and Variance Over/Under Recovery Variance Account.

As at December 31, 2014, regulatory assets for other variance and deferral accounts also included amounts for the Pension & OPEB Cash Versus Accrual Differential Deferral Account, the Pickering Life Extension Depreciation Variance Account, and the Pension & OPEB Cash Payment Variance Account. The Pickering Life Extension Depreciation Variance Account balance was recorded wholly during the period from November 1, 2014 to December 31, 2014. This balance represents an offset to the ratepayer credit for the reduction in depreciation expense for the Pickering nuclear generating station that was reflected both as a reduction to the new base regulated prices effective November 1, 2014 and the nuclear rate rider in effect to the end of 2014. The Pension & OPEB Cash Payment Variance Account records, effective November 1, 2014, the difference between OPG's actual contributions to its registered pension plans and expenditures on its OPEB and supplementary pension plans for the regulated business,

and the corresponding amounts reflected in the regulated prices. As at December 31, 2013, regulatory assets for other variance and deferral accounts also included the Tax Loss Variance Account and the Impact for USGAAP Deferral Account, the OEB-approved balances of which were fully amortized by December 31, 2014.

Regulatory liabilities for other variance and deferral accounts included amounts for the Income and Other Taxes Variance Account and the Hydroelectric Incentive Mechanism Variance Account. The Income and Other Taxes Variance Account includes deviations in income taxes for the regulated business, from those approved by the OEB in setting regulated prices and caused by changes in tax rates and rules, as well as reassessments. The Hydroelectric Incentive Mechanism Variance Account of OPG's Hydroelectric Incentive Mechanism net revenues above a specified threshold for the previously regulated hydroelectric facilities, and, effective November 1, 2014, for the newly regulated hydroelectric facilities.

The regulatory liabilities for other variance and deferral accounts as at December 31, 2014 and the regulatory assets for other variance and deferral accounts as at December 31, 2013 also included amounts for the Ancillary Services Net Revenue Variance Account and the Hydroelectric Water Conditions Variance Account. The Ancillary Services Net Revenue Variance Account was authorized by the OEB to capture differences between actual nuclear and regulated hydroelectric ancillary services net revenue and the forecast amounts of such revenue approved by the OEB in setting regulated prices. The Hydroelectric Water Conditions Variance Account captures the impact of differences in regulated hydroelectric electricity production due to differences between forecast water conditions underlying the production forecast approved by the OEB in setting regulated hydroelectric prices, and the actual water conditions. Both of these accounts apply to the newly regulated hydroelectric stations effective November 1, 2014.

In its March 2013 decision and April 2013 order, the OEB approved the recovery or repayment of the majority of the balances of the other variance and deferral accounts as at December 31, 2012 over a 24-month period ending December 31, 2014. Accordingly, effective January 1, 2013, OPG recorded amortization of the applicable balances on a straight-line basis over this period.

### Pension & OPEB Cash Versus Accrual Differential Deferral Account

The OEB established the Pension & OPEB Cash Versus Accrual Differential Deferral Account in its November 2014 decision. The deferral account records, effective November 1, 2014, the difference between OPG's actual pension and OPEB costs for the regulated business determined on an accrual basis and the corresponding actual cash expenditures for these plans. The OEB established the deferral account as a result of determining that the pension and OPEB amounts reflected in the regulated prices effective November 1, 2014 would be limited to a forecast of OPG's cash expenditures on its pension and OPEB plans, rather than costs determined on an accrual basis in accordance with US GAAP. In making this determination, the OEB indicated that a generic proceeding on the regulatory treatment and recovery of pension and OPEB costs would be beneficial, and that the disposition of the deferral account balance will be based on the outcome of that proceeding. The scope or timing of the generic proceeding has not been announced.

During the year ended December 31, 2014, OPG recognized a regulatory asset of \$36 million for the addition to the Pension & OPEB Cash Versus Accrual Differential Deferral Account. As directed by the OEB, no interest is recorded on the balance of this account.

### Pension and OPEB Regulatory Asset

The Pension and OPEB Regulatory Asset represents unamortized amounts in respect of OPG's pension and OPEB plans that have been recognized in OCI and not yet reclassified into the amortization component of the benefit costs in respect of these plans. These amounts are expected to be recovered from ratepayers through future regulated prices. The regulatory asset is reversed as underlying unamortized balances are amortized in components of benefit

costs. Refer to Note 3 for a detailed discussion of pension and OPEB cost recovery methodology under the heading *Rate Regulated Accounting*. The AOCI amounts related to pension and OPEB plans are presented in Note 11.

### **Deferred Income Taxes**

OPG is required to recognize deferred income taxes associated with its rate regulated operations, including deferred income taxes on temporary differences related to the regulatory assets and liabilities recognized for accounting purposes. In addition, OPG is required to recognize a separate regulatory asset or liability for the amount of deferred income taxes expected to be included in future regulated prices and recovered from, or paid to, customers. Income taxes are discussed in Note 9.

### 6. LONG-TERM DEBT

Long-term debt consists of the following as at December 31:

(millions of dollars)	2014	2013
Long-term debt <sup>1</sup>		
Notes payable to the OEFC		
Senior Notes <sup>2</sup>		
3.43% due 2015	500	500
4.91% due 2016	270	270
5.35% due 2017	900	900
5.27% due 2018	395	395
5.44% due 2019	365	365
4.56% due 2020	660	660
4.28% due 2021	185	185
3.30% due 2022	150	150
3.12% due 2023	40	40
5.07% due 2041	300	300
4.36% due 2042	200	200
UMH Energy Partnership debt <sup>3</sup>		
Senior Notes		
7.86% due to 2041	190	193
Lower Mattagami Energy Limited Partnership <sup>4</sup>		
Senior Notes		
2.59% due 2015	-	92
2.35% due 2017	200	200
4.46% due 2021	225	225
3.53% due 2024	200	-
5.26% due 2041	250	250
5.05% due 2043	200	200
4.26% due 2046	275	275
4.26% due 2052	225	225
	5,730	5,625
Less: due within one year	503	5
Long-term debt	5,227	5,620

<sup>1</sup> The interest rates disclosed reflect the effective interest rate of the debt.

<sup>2</sup> OEFC senior debt is entitled to receive, in full, amounts owing in respect of the senior debt and is pari passu to the Lower Mattagami Energy Limited Partnership (LME) senior notes.

<sup>3</sup> These notes are secured by the assets of the Upper Mattagami and Hound Chute project. Principal repayments of approximately \$3 million per year are paid on a semi-annual basis until maturity in 2041 at which time the remaining principal balance of \$116 million becomes due.

<sup>4</sup> These notes are secured by the assets of the Lower Mattagami River project, including existing operating facilities and facilities being constructed, and are recourse to OPG until the recourse release date. These notes rank pari passu to the OEFC senior notes. OPG maintained a credit facility with the OEFC related to the Niagara Tunnel project for an amount up to \$1.6 billion which expired on December 31, 2014. As at December 31, 2014, advances under this facility were \$1,065 million (2013 – \$1,065 million).

OPG maintained a \$500 million general corporate credit facility with the OEFC which expired on December 31, 2014 with no amounts outstanding. In December 2014, OPG entered into an agreement with the OEFC for an \$800 million general corporate credit facility which expires on December 31, 2016, in support of its financing requirements for the period 2015-2016. As at December 31, 2014, there were no amounts outstanding under this facility.

Interest paid in 2014 was \$273 million (2013 – \$255 million), of which \$264 million (2013 – \$246 million) relates to interest paid on long-term corporate debt.

The book value of the pledged assets as at December 31, 2014 was \$3,271 million (2013 - \$2,756 million).

A summary of the contractual maturities of all long-term borrowings by year is as follows:

(millions of dollars)	
0015	E02
2015	503
2016	273
2017	1,103
2018	398
2019	368
Thereafter	3,085
	5,730

### 7. SHORT-TERM DEBT AND NET INTEREST EXPENSE

OPG maintains a \$1 billion revolving committed bank credit facility, which is divided into two \$500 million multi-year term tranches. In May 2014, OPG renewed and extended both tranches by one year to May 2019. As at December 31, 2014 and 2013, there were no outstanding borrowings under the bank credit facility.

The LME maintains a \$600 million bank credit facility to support the funding requirements for the Lower Mattagami River project. The facility consists of two tranches. In August 2014, OPG extended the maturity of the first tranche to August 2019, from August 2018. The second tranche matures in August 2015. As at December 31, 2014, no external commercial paper was outstanding under this program (2013 – \$32 million).

As at December 31, 2014, OPG maintained \$25 million of short-term, uncommitted overdraft facilities and \$390 million of short-term, uncommitted credit facilities, which support the issuance of the Letters of Credit. OPG uses Letters of Credit to support its supplementary pension plans and for other general corporate purposes. As at December 31, 2014, a total of \$336 million of Letters of Credit had been issued. This included \$310 million for the supplementary pension plans, \$25 million for general corporate purposes, and \$1 million related to the operation of the PEC.

The Company has an agreement to sell an undivided co-ownership interest in its current and future accounts receivable to an independent trust. The Company also retains an undivided co-ownership interest in the receivables sold to the trust. Under the agreement, OPG continues to service the receivables. The transfer provides the trust with ownership of a share of the payments generated by the receivables, computed on a monthly basis. The trust's recourse to the Company is generally limited to its income earned on the receivables. In September 2014, the maximum amount of co-ownership interest that can be sold under this agreement was reduced to \$150 million and the expiry date was extended from November 30, 2014 to November 30, 2016. As at December 31, 2014, there were

Letters of Credit outstanding under this agreement of \$150 million (2013 – \$80 million), which were issued in support of OPG's supplementary pension plans.

In October 2014, UMH Energy Partnership (UMH) entered into an \$8 million of short-term, uncommitted overdraft facility and \$16 million of irrevocable, standby letters of credit facilities in support of its operations. As at December 31, 2014, a total of \$14 million of Letters of Credit had been issued under this facility.

The following table summarizes the net interest expense for the years ended December 31:

(millions of dollars)	2014	2013
Interest on long-term debt	291	280
Interest on short-term debt	9	9
Interest income	(10)	(10)
Interest capitalized to property, plant and equipment and intangible assets	(135)	(127)
Interest related to regulatory assets and liabilities <sup>1</sup>	(75)	(66)
Net interest expense	80	86

Includes interest to recognize the cost of financing related to regulatory assets and liabilities, as authorized by the OEB, and interest deferred in the Capacity Refurbishment Variance Account and the Bruce Lease Net Revenues Variance Account.

### 8. FIXED ASSET REMOVAL AND NUCLEAR WASTE MANAGEMENT LIABILITIES

The liabilities for fixed asset removal and nuclear waste management on a present value basis consist of the following as at December 31:

(millions of dollars)	2014	2013
Liability for nuclear used fuel management	10.459	9.957
Liability for nuclear decommissioning and low and intermediate	6,204	5.946
level waste management	-,	-,
Liability for non-nuclear fixed asset removal	365	354
Fixed asset removal and nuclear waste management liabilities	17,028	16,257

The changes in the fixed asset removal and nuclear waste management liabilities for the years ended December 31 are as follows:

(millions of dollars)	2014	2013
Liabilities, beginning of year	16,257	15,522
Increase in liabilities due to accretion 1	867	826
Increase in liabilities due to nuclear used fuel, nuclear waste management variable expenses and other expenses	116	109
Liabilities settled by expenditures on fixed asset removal and nuclear waste management	(212)	(199)
Change in the liabilities for non-nuclear fixed asset removal	-	(1)
Liabilities, end of year	17,028	16,257

<sup>1</sup> The increase in liabilities due to accretion for 2014 excludes the impact of regulatory variance and deferral accounts.

OPG's fixed asset removal and nuclear waste management liabilities are comprised of expected costs to be incurred up to and beyond termination of operations and the closure of nuclear, thermal generating plant facilities, and other facilities. Costs will be incurred for activities such as preparation for safe storage, safe storage, dismantling, demolition and disposal of facilities and equipment, remediation and restoration of sites, and the ongoing and longterm management of nuclear used fuel and L&ILW waste material. Under the terms of the Bruce agreement, OPG continues to be primarily responsible for the nuclear fixed asset removal and nuclear waste management liabilities associated with the Bruce nuclear generating stations.

The determination of the accrual for fixed asset removal and nuclear waste management costs requires significant assumptions since these programs are long-term in nature. The most recent update of the cost estimates for the nuclear waste management and decommissioning liabilities is contained in the approved 2012 ONFA Reference Plan.

For the purposes of calculating OPG's nuclear fixed asset removal and nuclear waste management liabilities, as at December 31, 2014, consistent with the current accounting end of life assumptions, nuclear station decommissioning is projected to occur over the next 40 years. The estimates for the Nuclear Liabilities include cash flow estimates for decommissioning nuclear stations for approximately 40 years after station shut down and to 2071 for placement of used fuel into the long-term disposal repository followed by extended monitoring.

The significant assumptions underlying operational and technical factors used in the calculation of the accrued Nuclear Liabilities are subject to periodic review. Changes to these assumptions, including changes to assumptions on the timing of the programs, end of life dates, financial indicators, or the technology employed may result in significant changes to the value of the accrued liabilities. With programs of this duration and the evolving technology to handle the nuclear waste, there is a significant degree of uncertainty surrounding the measurement of the costs for these programs, which may increase or decrease over time.

### Liability for Nuclear Used Fuel Management Costs

The liability for nuclear used fuel management represents the cost of managing the highly radioactive used nuclear fuel bundles. The federal NFWA, proclaimed into force in 2002, requires that Canada's nuclear fuel waste owners form a nuclear waste management organization, and that each waste owner establish a trust fund for used fuel management costs. To estimate its liability for nuclear used fuel management costs, OPG has adopted a conservative approach consistent with the Adaptive Phased Management concept approved by the Government of Canada, which assumes a deep geologic repository in-service date of 2035 at the earliest.

### Liability for Nuclear Decommissioning and L&ILW Management Costs

The liability for nuclear decommissioning and L&ILW management represents the estimated costs of decommissioning nuclear generating stations after the end of their service lives, as well as the cost of managing L&ILW generated by the nuclear stations. The significant assumptions used in estimating future nuclear fixed asset removal costs include decommissioning of nuclear generating stations on a deferred dismantlement basis, where the reactors will remain in a safe storage state for a 30-year period prior to an approximate 10-year dismantlement period.

The life cycle costs of L&ILW management include the costs of processing and storage of such radioactive wastes during and following the operation of the nuclear stations, as well as the costs of the ultimate long-term management of these wastes. The current assumptions used to establish the accrued L&ILW management costs include a L&ILW deep geologic repository. Agreement has been reached with local municipalities for OPG to develop a deep geologic repository for the long-term management of L&ILW adjacent to the Western Waste Management Facility. OPG has suspended design activities for the L&ILW deep geologic repository pending receipt of the site preparation and construction licence.

### Liability for Non-Nuclear Fixed Asset Removal Costs

The liability for non-nuclear fixed asset removal primarily represents the estimated costs of decommissioning OPG's thermal generating stations at the end of their services lives. The liability is based on third-party cost estimates after an in-depth review of plant sites and an assessment of required clean-up and restoration activities. In 2011, OPG

completed a review of the liability for most of its thermal generating stations. For the purpose of measuring the liability, asset removal activities are estimated to take place over the next 15 years.

As at December 31, 2014, in addition to the \$143 million liability for active sites, OPG has an ARO of \$222 million for decommissioning and restoration costs associated with plant sites that are not currently in use for electricity generation, including the Nanticoke and Lambton generating stations.

### **Ontario Nuclear Funds Agreement**

The Decommissioning Fund was established to fund the future costs of nuclear fixed asset removal, long-term L&ILW management, and certain costs for used fuel storage incurred after the stations are shutdown. As at December 31, 2014, the Decommissioning Fund was in an overfunded position.

The Used Fuel Fund was established to fund future costs of long-term nuclear used fuel waste management. OPG is responsible for the risk and liability of cost increases for used fuel waste management, subject to graduated liability thresholds specified in the ONFA, which limit OPG's total financial exposure at approximately \$13.7 billion in present value dollars as at December 31, 2014, based on used fuel bundle projections of 2.23 million bundles, consistent with the station life assumptions included within the initial financial reference plan. The graduated liability thresholds do not apply to additional used fuel bundles beyond 2.23 million.

OPG makes quarterly payments to the Used Fuel Fund over the life of its nuclear generating stations, as specified in the ONFA. Required funding for 2014 under the ONFA was \$139 million (2013 – \$184 million), including a contribution to the Ontario NFWA Trust (the Trust) of \$161 million (2013 – \$154 million). The Trust forms part of the Used Fuel Fund, and contributions to the Trust, as required by the NFWA, may be applied towards OPG's ONFA payment obligations. Based on the approved 2012 ONFA Reference Plan, OPG is required to contribute annual amounts to the Used Fuel Fund, ranging from \$143 million to \$288 million over the years 2015 to 2019. The required contributions are disclosed in Note 15.

As required by the terms of the ONFA, the Province has provided a Provincial Guarantee to the Canadian Nuclear Safety Commission (CNSC) since 2003, on behalf of OPG. The *Nuclear Safety and Control Act* (Canada) requires OPG to have sufficient funds available to discharge the current nuclear decommissioning and waste management liabilities. The Provincial Guarantee provides for any shortfall between the CNSC consolidated financial guarantee requirement and the value of the Nuclear Funds. OPG pays the Province an annual guarantee fee of 0.5 percent of the amount of the Provincial Guarantee provided by the Province. The current value of the Provincial Guarantee amount of \$1,551 million is in effect through to the end of 2017. In each of January 2014 and 2015, OPG paid a guarantee fee of \$8 million based on a Provincial Guarantee amount of \$1,551 million.

#### **Decommissioning Fund**

Upon termination of the ONFA, the Province has a right to any excess funds in the Decommissioning Fund, which is the excess of the fair market value of the Decommissioning Fund assets over the estimated completion costs, as per the most recently approved ONFA Reference Plan. When the Decommissioning Fund is overfunded, OPG limits the earnings it recognizes in its consolidated financial statements by recording a payable to the Province, such that the balance of the Decommissioning Fund is equal the cost estimate of the liability based on the most recently approved ONFA Reference Plan. The payable to the Province may be reduced in subsequent periods in the event that the Decommissioning Fund earns less than its target rate of return or in the event that a new ONFA Reference Plan is approved with a higher estimated decommissioning liability. When the Decommissioning Fund is underfunded, the earnings on the Decommissioning Fund reflect actual fund returns based on the market value of the assets.

The Province's right to any excess funding in the Decommissioning Fund upon termination of the ONFA results in OPG capping its annual earnings at 3.25 percent plus long-term Ontario Consumer Price Index (CPI), which is the rate of growth in the liability for the estimated completion cost, as long as the Decommissioning Fund is in an overfunded status.

Under the ONFA, if there is a surplus in the Decommissioning Fund such that the liabilities, as defined by the most recently approved ONFA Reference Plan, are at least 120 percent funded, OPG may direct up to 50 percent of the surplus over 120 percent to be treated as a contribution to the Used Fuel Fund and the OEFC would be entitled to a distribution of an equal amount. In such instances, OPG recognizes 50 percent of the excess greater than 120 percent in income. Since OPG is responsible for the risks associated with liability cost increases and investment returns in the Decommissioning Fund, future contributions to the Decommissioning Fund may be required should the fund be in an underfunded position at the time of the next liability reference plan review.

The investments in the Decommissioning Fund include a diversified portfolio of equities and fixed income securities that are invested across geographic markets, as well as investments in infrastructure and Canadian real estate. The Nuclear Funds are invested to fund long-term liability requirements and, as such, the portfolio asset mix is structured to achieve the required return over a long-term horizon. While short-term fluctuations in market value will occur, managing the long-term return of the Nuclear Funds remains the primary goal.

### Used Fuel Fund

Under the ONFA, the Province guarantees OPG's annual return in the Used Fuel Fund at 3.25 percent plus the change in the Ontario CPI for funding related to the first 2.23 million used fuel bundles (committed return). OPG recognizes the committed return on the Used Fuel Fund and includes it in the earnings on the nuclear fixed asset removal and nuclear waste management funds. The difference between the committed return on the Used Fuel Fund and the actual market return determined based on the fair value of the Used Fuel Fund's assets related to the first 2.23 million used fuel bundles is recorded as due to or due from the Province. The amount due to or due from the Province represents the amount OPG would pay to or receive from the Province if the committed return were to be settled as of the consolidated balance sheet date. As prescribed under the ONFA, OPG's contributions for fuel bundles in excess of 2.23 million are not subject to the Province's guaranteed rate of return, and earn a return based on changes in the market value of the assets of the Used Fuel Fund.

Under the ONFA, the Province is entitled to any surplus in the Used Fuel Fund, subject to a threshold funded ratio of 110 percent compared to the value of the associated liabilities based on the most recently approved ONFA Reference Plan.

# Nuclear Funds

The nuclear fixed asset removal and nuclear waste management funds as at December 31 consist of the following:

	Fair Value	
(millions of dollars)	2014	2013
Decommissioning Fund	7,346	6 501
Decommissioning Fund		6,591
Due to Province – Decommissioning Fund	(1,100)	(624)
	6,246	5,967
Used Fuel Fund <sup>1</sup>	9,562	8,519
Due to Province – Used Fuel Fund	(1,429)	(990)
	8,133	7,529
Total Nuclear Funds	14,379	13,496
Less: current portion	25	25
	44.054	10.171
Non-current Nuclear Funds	14,354	13,471

<sup>1</sup> The Ontario NFWA Trust represented \$3,114 million as at December 31, 2014 (2013 – \$2,668 million) of the Used Fuel Fund on a fair value basis.

The fair value of the securities invested in the Nuclear Funds as at December 31 is as follows:

	Fair Value	
(millions of dollars)	2014	2013
Cash and each aquivalants and short term investments	464	262
Cash and cash equivalents and short-term investments Alternative investments	1,003	598
Pooled funds	1,293	2,173
Marketable equity securities	8,176	7,332
Fixed income securities	5,969	4,713
Net receivables/payables	3	32
	16,908	15,110
Due to Province	(2,529)	(1,614)
	14,379	13,496

The nature and type of investments made by OPG have the attributes of an investment company in accordance with ASC Topic 946. As such, beginning January 1, 2014, the Company applied guidance outlined in ASC Topic 946 for all investments owned by the Nuclear Funds. OPG's consolidated financial statements retained investment company accounting for the Nuclear Funds. The adoption of investment company accounting for the Nuclear Funds. The adoption of investment company accounting for the Nuclear Funds did not result in an effect on net income or change in net assets from operations, as investments held by OPG's Nuclear Funds continue to be recorded at fair value.

The investments in the Nuclear Funds are segregated from other assets in the consolidated group that are not investment companies.

The historical cost, gross unrealized aggregate appreciation and depreciation of investment, gross unrealized foreign exchange gains, and fair value of the Nuclear Funds as of December 31, 2014 and 2013 are summarized as follows:

		2014	
	Decommissioning	Used Fuel	
(millions of dollars)	Fund	Fund <sup>1</sup>	Total
Historical cost	6,188	8,163	14,351
Gross unrealized gains (losses)			
Aggregate appreciation	1,218	1,441	2,659
Aggregate depreciation	(150)	(174)	(324)
Foreign exchange	90	132	222
	7,346	9,562	16,908
Due to Province	(1,100)	(1,429)	(2,529)
Total fair value	6,246	8,133	14,379
Less: current portion	7	18	25
Non-current fair value	6,239	8,115	14,354

<sup>1</sup> The Ontario NFWA Trust represented \$3,114 million as at December 31, 2014 of the Used Fuel Fund on a fair value basis.

	2013		
(millions of dollars)	Decommissioning Fund	Used Fuel Fund <sup>1</sup>	Total
Historical cost Gross unrealized gains (losses)	5,571	7,240	12,811
Aggregate appreciation	1,111	1,365	2,476
Aggregate depreciation	(118)	(136)	(254)
Foreign exchange	27	<b>`</b> 50 <sup>′</sup>	`77 <sup>´</sup>
· · · ·	6,591	8,519	15,110
Due to Province	(624)	(990)	(1,614)
Fair value	5,967	7,529	13,496
Less: current portion	12	13	25
Non-current fair value	5,955	7,516	13,471

<sup>1</sup> The Ontario NFWA Trust represented \$2,668 million as at December 31, 2013 of the Used Fuel Fund on a fair value basis.

Net realized and unrealized gains or losses from investments for the years ended December 31, 2014 and 2013 are summarized as follows:

		2014	
	Decommissioning	Used Fuel	
(millions of dollars)	Fund	Fund	Total
Net realized gains			
Realized gains	401	545	946
Realized foreign exchange gains	36	36	72
Net realized gains	437	581	1,018
Net unrealized gains			
Unrealized gains	75	38	113
Unrealized foreign exchange gains	63	82	145
Net unrealized gains	138	120	258

	2013		
(millions of dollars)	Decommissioning Fund	Used Fuel Fund	Total
Net realized gains			
Realized gains	182	174	356
Realized foreign exchange losses	(9)	(8)	(17)
Net realized gains	173	166	339
Net unrealized gains			
Unrealized gains	410	639	1,049
Unrealized foreign exchange gains	97	114	211
Net unrealized gains	507	753	1,260

The change in the Nuclear Funds for the years ended December 31 is as follows:

	Fair	Value
(millions of dollars)	2014	2013
	5 0 0 7	
Decommissioning Fund, beginning of year	5,967	5,707
Increase in fund due to return on investments	782	854
Decrease in fund due to reimbursement of expenditures	(27)	(34)
Increase in due to Province	(476)	(560)
Decommissioning Fund, end of year	6,246	5,967
Used Fuel Fund, beginning of year	7,529	7,010
Increase in fund due to contributions made	139	184
Increase in fund due to contributions made	954	
		1,131
Decrease in fund due to reimbursement of expenditures	(50)	(41)
Increase in due to Province	(439)	(755)
	0.400	7 500
Used Fuel Fund, end of year	8,133	7,529

The earnings from the Nuclear Funds during 2014 and 2013 were impacted by the Bruce Lease Net Revenues Variance Account authorized by the OEB. The earnings on the Nuclear Funds for the years ended December 31 are as follows:

(millions of dollars)	2014	2013
Decommissioning Fund Used Fuel Fund Bruce Lease Net Revenues Variance Account	306 515 (107)	294 376 (42)
Total earnings	714	628

### 9. INCOME TAXES

OPG follows the liability method of tax accounting for all its business segments. The Company records an offsetting regulatory asset or liability for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers for generation from OPG's regulated facilities.

During 2014, OPG recorded a decrease in the deferred income tax liability for the income taxes that are expected to be recovered or refunded through regulated prices charged to customers of \$22 million (2013 – \$109 million). Since these deferred income taxes are expected to be refunded through future regulated prices, OPG recorded a corresponding decrease to the regulatory asset for deferred income taxes. As a result, the deferred income tax expense for 2014 and 2013 was not impacted.

The amount of tax refunds received net of taxes paid during 2014 was \$29 million (the amount of taxes paid during 2013 was \$14 million).

The following table summarizes the deferred income tax liabilities recorded for the rate regulated operations that are expected to be recovered through future regulated prices:

(millions of dollars)	2014	2013
January 1:		
Deferred income tax liabilities on temporary differences related to regulated operations	418	500
Deferred income tax liabilities resulting from the regulatory asset for deferred income taxes	141	168
Impact of regulation of the newly regulated facilities:	559	668
Deferred income tax liabilities on temporary differences as of June 30, related to the hydroelectric facilities prescribed for regulation effective in 2014 ( <i>Note 3</i> )	243	-
Deferred income tax liabilities resulting from the regulatory asset for deferred income taxes related to the regulation of hydroelectric facilities effective in 2014 ( <i>Note 3</i> )	81	-
Changes during the year:	883	668
Decrease in deferred income tax liabilities on temporary differences related to regulated operations, including newly regulated hydroelectric facilities effective July 1, 2014	(17)	(82)
Decrease in deferred income tax liabilities resulting from the regulatory asset for deferred income taxes, including newly regulated hydroelectric facilities effective July 1, 2014	(5)	(27)
Balance at December 31	861	559

A reconciliation between the statutory and the effective rate of income taxes is as follows:

(millions of dollars)	2014	2013
Income before income taxes and extraordinary item	707	166
Combined Canadian federal and provincial statutory enacted		
income tax rates	26.5%	26.5%
Statutory income tax rates applied to accounting income	187	44
(Decrease) increase in income taxes resulting from:		
Income tax components of regulatory variance and deferral accounts	(79)	(102)
Non-taxable income items	(6)	(3)
Regulatory asset for deferred income taxes	25	113
Scientific Research and Experimental Development	(16)	(22)
investment tax credits	• •	. ,
Other	28	1
	(48)	(13)
Income tax expense	139	31
Effective rate of income taxes	19.7%	18.7%

Significant components of the income tax expense are presented in the table below:

(millions of dollars)	2014	2013
Current income tax expense (recovery):		
Current payable	123	48
Change in income tax positions	(15)	9
Income tax components of regulatory variance and deferral accounts	(10)	9
Scientific Research and Experimental Development investment tax credits	(29)	(30)
Other	14	7
	83	43
Deferred income tax expense (recovery):		
Change in temporary differences	100	(14)
Income tax components of regulatory variance and deferral accounts	(69)	(111)
Regulatory asset for deferred income taxes	25	113
	56	(12)
Income tax expense	139	31

The income tax effects of temporary differences that give rise to deferred income tax assets and liabilities as at December 31 are as follows:

(millions of dollars)	2014	2013
Deferred income tax assets:		
Fixed asset removal and nuclear waste management liabilities	4,247	4,055
Other liabilities and assets	1,973	1,672
Future recoverable Ontario minimum tax	11	30
	6,231	5,757
Deferred income tax liabilities:		
Property, plant and equipment and intangible assets	(1,478)	(1,463)
Nuclear fixed asset removal and nuclear waste management funds	(3,595)	(3,374)
Other liabilities and assets	(1,986)	(1,499)
	(7,059)	(6,336)
Net deferred income tax liabilities	(828)	(579)
Represented by:		
Current portion – asset (liability)	8	(14)
Long-term portion – liability	(836)	(565)
	(828)	(579)

The tax benefit associated with an income tax position is recognized only when it is more likely than not that such a position will be sustained upon examination by the taxing authorities based on the technical merits of the position. The current and deferred income tax benefit is equal to the largest amount, considering possible settlement outcomes, that is greater than 50 percent likely of being realized upon settlement with the taxing authorities.

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

(millions of dollars)	2014	2013
Unrecognized tax benefits, beginning of year	91	82
Additions based on tax positions related to the current year	11	13
Additions for tax positions of prior years	12	-
Reductions for tax positions of prior years	(35)	(4)
· · · ·		
Unrecognized tax benefits, end of year	79	91

As at December 31, 2014, OPG's unrecognized tax benefits were \$79 million (2013 – \$91 million), excluding interest and penalties, all of which, if recognized, would affect OPG's effective tax rate. Changes in unrecognized tax benefits over the next 12 months cannot be predicted with certainty.

OPG recognizes interest and penalties related to unrecognized tax benefits as income tax expense. As at December 31, 2014, OPG has recorded interest on unrecognized tax benefits of \$6 million (2013 – \$10 million). OPG considers its significant tax jurisdiction to be Canada. OPG remains subject to income tax examination for years after 2010.

# 10. ACCUMULATED OTHER COMPREHENSIVE LOSS

The changes in the balance of each component of accumulated other comprehensive loss (AOCL), net of taxes, during the years ended December 31, 2014 and 2013 are as follows:

		2014	
(millions of dollars)	Unrealized Gains and Losses on Cash Flow Hedges <sup>1</sup>	Pension and Other Post-Employment Benefits <sup>1</sup>	Total <sup>1</sup>
AOCL, beginning of year	(129)	(555)	(684)
Net loss on cash flow hedges	(2)	-	(2)
Recognition of initial pension and OPEB regulatory asset for amounts recorded prior to regulation of facilities, effective July 1, 2014 (Note 3)	ï	184	184
Actuarial loss on re-measurement of liabilities for pension and other post-employment benefits		(35)	(35)
Amounts reclassified from AOCL	14	27	41
Other comprehensive income for the year	12	176	188
AOCL, end of year	(117)	(379)	(496)

<sup>1</sup> All amounts are net of income taxes.

(millions of dollars)	Unrealized Gains and Losses on Cash Flow Hedges <sup>1</sup>	Pension and Other Post-Employment Benefits <sup>1</sup>	Total <sup>1</sup>
AOCL, beginning of year	(156)	(823)	(979)
Net gain on cash flow hedges	<u>14</u>	-	14
Actuarial gain and past service credits on re-measurement of liabilities for pension and other post-employment benefits	-	226	226
Amounts reclassified from AOCL	13	42	55
Other comprehensive income (loss) for the year	27	268	295
AOCL, end of year	(129)	(555)	(684)

<sup>1</sup> All amounts are net of income taxes.

The significant amounts reclassified out of each component of AOCL, net of income taxes, during the years ended December 31, 2014 and 2013 are as follows:

	Amount Reclass	sified from A	OCL
(millions of dollars)	2014	2013	Statement of Income Line Item
Amortization of losses from cash flow hedges Losses Income tax expense	16 (2) 14	15 (2) 13	Net interest expense
Amortization of amounts related to pension and other post-employment benefits Actuarial losses and past service costs Income tax expense	37 (10) 27	57 (15) 42	See (1) below
Total reclassifications for the year	41	55	

<sup>1</sup> These AOCL components are included in the computation of pension and OPEB costs (see Note 11 for additional details).

# 11. PENSION AND OTHER POST-EMPLOYMENT BENEFITS

## **Fund Assets**

The OPG registered pension fund investment guidelines are stated in an approved Statement of Investment Policies and Procedures (SIPP). The SIPP is reviewed and approved by OPG's Audit and Finance Committee at least annually and includes a discussion regarding investment objectives and expectations, asset mix and rebalancing, and the basis for measuring the performance of the pension fund assets.

In accordance with the SIPP, investment allocation decisions are made with a view to achieve OPG's objective to meet obligations of the plan as they come due. The pension fund assets are invested in three categories of asset classes. The first category is liability hedging assets which are intended to hedge the inflation and interest rate sensitivity of the plan liabilities. The second category is return enhancing assets which are intended to obtain higher investment returns compared to the returns expected for liability hedging assets. The third category is return diversifying strategies which are intended to improve the overall return of the pension fund while controlling the amount of downside market risk.

To achieve the above objective, OPG has adopted the following target strategic asset allocation:

	Target
Asset Class	
Liability Hedging Assets	54%
Return Enhancing Assets	33%
Return Diversifying Assets	13%

The plan may enter into derivative securities, such as interest rate swaps and forward foreign exchange contracts, for risk management purposes, where such activity is consistent with its investment objective.

## Significant Concentrations of Risk in Fund Assets

The assets of the pension fund are diversified to limit the impact of any individual investment. The pension fund is diversified across multiple asset classes. Fixed income securities are diversified among Canadian government provincial bonds, government agency bonds, real return bonds, corporate bonds, and an interest rate overlay hedging program, which is disclosed under pooled funds. Equity securities are diversified across Canadian, US, and non-North American stocks. There are also real estate and infrastructure portfolios that are approximately five percent of the total pension fund assets. Investments in the above asset classes are further diversified across funds, investment managers, strategies, vintages, sectors and geographies, depending on the specific characteristics of each asset class.

Credit risk with respect to the pension fund's fixed income securities is managed by risk tolerance guidelines, which requires that fixed income securities comply with various investment constraints that ensure prudent diversification and prescribed minimum required credit rating quality. Credit risk, as it relates to the pension fund's derivatives, is managed through the use of International Swap and Derivatives Association documentation and counterparty management performed by the fund's investment managers.

# Risk Management

Risk management oversight with respect to the pension fund includes but is not limited to the following activities:

- Periodic asset/liability management and strategic asset allocation studies
- Monitoring of funding levels and funding ratios
- Monitoring compliance with asset allocation guidelines and investment management agreements
- Monitoring asset class performance against asset class benchmarks
- Monitoring investment manager performance against benchmarks
- Monitoring of risk tolerance guidelines.

# Expected Rate of Return on Plan Assets

The expected rate of return on plan assets is based on the fund's asset allocation, as well as the expected return considering long-term historical risks and returns associated with each asset class within the plan portfolio. The asset management decisions consider the economic liabilities of the plan.

# Fair Value Measurements

OPG is required to classify fair value measurements using a fair value hierarchy. This hierarchy groups financial instruments into three levels, based on the significance of inputs used in measuring the fair value of the assets and liabilities. Refer to Note 13 for a detailed discussion of fair value measurements and the fair value hierarchy.

The following tables present pension plan assets measured at fair value in accordance with the fair value hierarchy:

	December 31, 2014			
(millions of dollars)	Level 1	Level 2	Level 3	Total
Cash and cash equivalents	251	-	-	251
Short-term investments	-	3	-	3
Fixed income				
Corporate debt securities	-	349	-	349
Non-US government bonds	-	1,704	-	1,704
Equities				
Canadian	1,955	-	-	1,955
US	2,016	-	-	2,016
Non-North American	2,147	-	-	2,147
Pooled funds	12	2,450	866	3,328
Infrastructure	-	-	338	338
Real estate	-	-	300	300
Dther	-	-	5	5
	6,381	4,506	1,509	12,396 <sup>1</sup>

<sup>1</sup> The table above excludes pension fund receivables and payables.

	December 31, 2013			
(millions of dollars)	Level 1	Level 2	Level 3	Total
Cash and cash equivalents	320	-	-	320
Short-term investments	-	5	-	5
Fixed income				
Corporate debt securities	-	315	-	315
Non-US government bonds	-	1,514	-	1,514
Equities				
Canadian	2,087	-	-	2,087
US	2,031	-	-	2,031
Non-North American	2,357	-	-	2,357
Pooled funds	38	1,959	11	2,008
Infrastructure	-	-	208	208
Real estate	-	-	210	210
Other	-	2	-	2
	6,833	3,795	429	11,057

<sup>1</sup> The table above exclude pension fund receivables and payables.

The following tables present the changes in the fair value of financial instruments classified in Level 3:

		For the years ended December 31						
(millions of dollars)	Pooled Funds	Infrastructure	Real Estate	Other	Total			
Opening balance, January 1, 2013	8	160	72	-	240			
Total realized and unrealized gains	d unrealized gains 3 19		6	-	28			
Purchases, sales, and settlements	-	29	132	-	161			
Closing balance, December 31, 2013	11	208	210	-	- 429			
Transfer from Level 2 to Level 3	-	-	-	2	2			
Total realized and unrealized gains	69	37	76	-	182			
Purchases, sales, and settlements	786	93	14	3	896			
Closing balance, December 31, 2014	866	338	300	5	1,509			

During the years ended December 31, 2014 and 2013, there were no transfers between Level 1 and Level 2.

# **Plan Costs and Liabilities**

Details of OPG's pension and OPEB obligations, pension fund assets and costs are presented in the following tables:

	Registered and Supplementary Pension Plans			Employment lefits
	2014	2013	2014	2013
Weighted Average Assumptions – Benefit Obligations at Year-End				
Rate used to discount future benefits	4.00%	4.90%	4.03%	4.91%
Salary schedule escalation rate - next six years	2.00%	2.50%	2.50%	2.50%
- thereafter	2.50%	2.50%	2.50%	2.50%
Rate of cost of living increase to pensions	2.00%	2.00%	n/a	n/a
Initial health care trend rate	n/a	n/a	6.09%	6.19%
Ultimate health care trend rate	n/a	n/a	4.33%	4.34%
Year ultimate health care trend rate reached	n/a	n/a	2030	2030
Rate of increase in disability benefits	n/a	n/a	2.00%	2.00%

	Registered and Supplementary Pension Plans		Other Post-Employm Benefits	
	2014	2013	2014	2013
Weighted Average Assumptions – Costs for the Year				
Expected return on plan assets, net of expenses	6.25%	6.25%	n/a	n/a
Rate used to discount future benefits	4.90%	4.30%	4.90%	4.32%
Salary schedule escalation rate	2.50%	2.50%	2.50%	2.50
Rate of cost of living increase to pensions	2.00%	2.00%	n/a	n/a
Initial health care trend rate	n/a	n/a	6.19%	6.38%
Ultimate health care trend rate	n/a	n/a	4.34%	4.38%
Year ultimate health care trend rate reached	n/a	n/a	2030	2030
Rate of increase in disability benefits	n/a	n/a	2.00%	2.00%
Expected average remaining service life for employees (years)	12	13	13	14

	Regis Pensior		Suppler Pensio		Other Emplo Bene	yment
(millions of dollars)	2014	2013	2014	2013	2014	2013
Components of Cost Recognized Current service costs Interest on projected benefit obligation Expected return on plan assets, net of expenses Amortization of past service costs <sup>1</sup> Amortization of net actuarial loss <sup>1</sup> Recognition of LTD net actuarial gain	238 658 (628) - 260 -	291 589 (648) - 244 -	8 14 - - 4	10 13 - 6 -	64 135 - - 6 (3)	106 139 - 1 48 (32)
Costs recognized <sup>2</sup>	528	476	26	29	202	262

<sup>1</sup> The amortization of past service costs and net actuarial loss was recognized as an increase to OCI. This increase was partially offset by the impact of the Pension and OPEB Regulatory Asset as discussed in Note 5.

<sup>2</sup> Excludes the impact of regulatory variance and deferral accounts. These regulatory accounts are discussed in Note 5.

Total benefit costs, including the impact of the Pension and OPEB Cost Variance Account, the Pension & OPEB Cash Payment Variance Account, the Pension & OPEB Cash Versus Accrual Differential Deferral Account, for the years ended December 31 are as follows:

(millions of dollars)	2014	2013
Registered pension plans	528	476
Supplementary pension plans	26	29
Other post-employment benefits	202	262
Pension and OPEB Cost Variance Account (Note 5)	(254)	(312)
Pension & OPEB Cash Payment Variance Account (Note 5)	(6)	-
Pension & OPEB Cash Versus Accrual Differential Deferral Account (Note 5)	(36)	-
Pension and other post-employment benefit costs	460	455

The pension and OPEB obligations and the pension fund assets measured as at December 31 are as follows:

	Regist Pension		Supplen Pensior		Other Post- Employment Benefits	
(millions of dollars)	2014	2013	2014	2013	2014	2013
Change in Plan Assets						
Fair value of plan assets at beginning of year	10,961	10,337	_	-	-	-
Contributions by employer	364	306	16	14	93	87
Contributions by employees	70	74	-	-	-	-
Actual return on plan assets, net of	1,677	923	-	-	-	-
expenses						
Benefit payments	(665)	(679)	(16)	(14)	(93)	(87)
	40 407	10.001				
Fair value of plan assets at end of year	12,407	10,961	-	-	-	-
Change in Projected Benefit Obligations						
Projected benefit obligations at beginning of year	13,422	13,669	289	297	2,719	3,174
Employer current service costs	238	291	8	10	64	106
Contributions by employees	70	74	-	-	-	-
Interest on projected benefit obligation	658	589	14	13	135	139
Benefit payments	(665)	(679)	(16)	(14)	(93)	(87)
Past service credits	· -	-	-	-	· -	(2)
Net actuarial loss (gain)	1,946	(522)	22	(17)	318	(611)
Projected benefit obligations at end of year	15,669	13,422	317	289	3,143	2,719
Funded status deficit at and of year	(3,262)	(2.461)	(317)	(289)	(3,143)	(2.710)
Funded status – deficit at end of year	(3,202)	(2,461)	(317)	(209)	(3,143)	(2,719)

The following table provides the pension and OPEB liabilities and their classification on the consolidated balance sheets as at December 31:

	•	Registered Pension Plans			Other Post- Employment Benefits	
(millions of dollars)	2014	2013	2014	2013	2014	2013
Current liabilities Non-current liabilities	- (3,262)	- (2,461)	(9) (308)	(9) (280)	(93) (3,050)	(91) (2,628)
Total liabilities	(3,262)	(2,461)	(317)	(289)	(3,143)	(2,719)

The accumulated benefit obligations for the registered pension plans and supplementary pension plans as at December 31, 2014 are \$14,333 million and \$274 million, respectively (2013 – \$12,242 million and \$237 million, respectively). The accumulated benefit obligation differs from the projected benefit obligation in that the accumulated benefit obligation about future compensation levels.

The following table provides the components of OPG's OCI related to pension and OPEB plans and the offsetting Pension and OPEB Regulatory Asset as discussed in Note 5 for the years ended December 31, on a pre-tax basis:

	Registered Pension Plans		Supplementary Pension Plans		Other Post- Employment Benefits	
(millions of dollars)	2014	2013	2014	2013	2014	2013
Changes in plan assets and benefit obligations recognized in OCI						
Current year net actuarial loss (gain)	897	(797)	22	(17)	321	(579)
Current year past service credits	-	-	-	-	-	(2)
Amortization of net actuarial loss	(260)	(244)	(4)	(6)	(6)	(48)
Amortization of past service costs	-	-	-	-	-	(1)
Total decrease (increase) in OCI	637	(1,041)	18	(23)	315	(630)
Less: Increase (decrease) in Pension and OPEB Regulatory Asset, excluding	652	(814)	19	(18)	289	(504)
extraordinary gain (Note 5)						
Less: Recognition of initial Pension & OPEB regulatory asset related to facilities prescribed for rate regulation beginning in 2014 ( <i>Note 3</i> )	219	-	5	-	21	-
Net (increase) decrease in OCI (pre-tax)	(234)	(227)	(6)	(5)	5	(126)

The following table provides the components of OPG's AOCL and the offsetting Pension and OPEB Regulatory Asset that have not yet been recognized as components of benefit costs as at December 31, on a pre-tax basis:

	Registered Pension Plans		Supplementary Pension Plans		Other Post- Employment Benefits	
(millions of dollars)	2014	2013	2014	2013	2014	2013
Unamortized amounts recognized in AOCL Past service costs	-	-	-	-	1	1
Net actuarial loss Total recognized in AOCL	4,133 4.133	3,496 3.496	<u>97</u> 97	<u>79</u> 79	638 639	<u>323</u> 324
Less: Pension and OPEB Regulatory Asset (Note 5)	3,702	2,831	88	79 64	573	263
Net recognized in AOCL (pre-tax)	431	665	9	15	66	61

The following table provides the components of OPG's AOCI and the offsetting Pension and OPEB Regulatory Asset as at December 31 (included in the table above) that are expected to be amortized as components of benefit costs and recognized as increases to OCI and reductions in the Pension and OPEB Regulatory Asset, related to the currently regulated facilities, in 2015, on a pre-tax basis:

(millions of dollars)	Registered Pension Plans	Supplementary Pension Plans	Other Post- Employment Benefits
Net actuarial loss	292	6	27
Total increase in AOCI	292	6	27
Less: Estimated decrease in Pension and OPEB Regulatory Asset	261	5	25
Net increase in AOCI (pre-tax)	31	1	2

Based on the most recently filed actuarial valuation, for funding purposes, of the OPG registered pension plan, as at January 1, 2014, there was an unfunded liability on a going-concern basis of \$1,143 million and a deficiency on a wind-up basis of \$7,034 million. In the previously filed actuarial valuation, as at January 1, 2011, there was an unfunded liability on a going-concern basis of \$555 million and a deficiency on a wind-up basis of \$5,663 million. The funded status to be determined in the next filed funding valuation, which must have an effective date no later than January 1, 2017, could be significantly different. For 2015, OPG's required contribution to its registered pension plan is expected to be \$364 million. The amount of OPG's additional voluntary contribution, if any, is revisited from time to time. OPG will continue to assess the requirements for contributions to the pension plan.

Based on the most recently filed actuarial valuation, for funding purposes, of the NWMO registered pension plan, as at January 1, 2014, there was a surplus on a going-concern basis of \$23 million and a deficiency on a wind-up basis of \$1 million. In the previously filed actuarial valuation, as at January 1, 2013, there was a surplus on a going-concern basis of \$14 million and a deficiency on a wind-up basis of \$15 million. The next filed funding valuation must have an effective date no later than January 1, 2015.

The supplementary pension plans are not funded, but are secured by Letters of Credit totalling \$310 million as at December 31, 2014 (2013 – \$302 million).

Estimated future benefit payments to participants in the pension and OPEB plans based on the assumptions used to measure the benefit obligations as at December 31, 2014 are as follows:

(millions of dollars)	Registered Pension Plans	Supplementary Pension Plans	Other Post- Employment Benefits
2015	563	10	93
2016	590	11	97
2017	596	11	101
2018	634	12	107
2019	666	13	112
2020 through 2024	3,788	77	636

A one percent increase or decrease in the health care trend rate would result in an increase in the current service and interest components of the 2014 OPEB cost recognized of \$42 million (2013 – \$54 million) or a decrease in the service and interest components of the 2014 OPEB cost recognized of \$31 million (2013 – \$39 million). A one percent increase or decrease in the health care trend rate would result in an increase in the projected OPEB obligation at December 31, 2014 of \$567 million (2013 – \$472 million) or a decrease in the projected OPEB obligation at December 31, 2014 of \$432 million (2013 – \$460 million).

## 12. RISK MANAGEMENT AND DERIVATIVES

OPG is exposed to risks related to changes in electricity prices associated with a wholesale spot market for electricity in Ontario, changes in market interest rates on debt expected to be issued in the future, and movements in foreign currency that affect its assets, liabilities, and forecasted transactions. Select derivative instruments are used to manage such risks. Derivatives are used as hedging instruments, as well as for trading purposes.

Interest rate risk is the risk that the value of assets and liabilities can change due to movements in related interest rates. Interest rate risk for OPG arises with the need to refinance existing debt and/or undertake new financing. The management of these risks is undertaken by using derivatives to hedge the exposure in accordance with corporate risk management policies. OPG periodically uses interest rate swap agreements to mitigate elements of interest rate risk exposure associated with anticipated financing.

The LME has entered into forward start interest rate swaps to hedge against the effect of future changes in interest rates for long-term debt for the Lower Mattagami River project. All forward interest rate swap contracts have been offset or settled since the second quarter of 2014.

Electricity price risk for the Company is the potential for adverse movements in the market price of electricity. Exposure to electricity price risk is reduced as a result of regulated prices and contractual arrangements for a significant portion of OPG's business. Effective November 1, 2014, virtually all of this exposure was mitigated with the implementation of a regulated price for OPG's 48 previously unregulated hydroelectric facilities, which were prescribed for regulation beginning in 2014.

The conditional reduction to revenue in the future, embedded in the terms of the Bruce Lease, is treated as a derivative. Assumptions related to future electricity prices impact the valuation of the derivative liability embedded in the Bruce Lease.

OPG's foreign exchange exposure is attributable to two primary factors: US dollar denominated transactions such as the purchase of fuels. OPG enters into foreign exchange derivatives and agreements with major financial institutions, when necessary, in order to manage the Company's exposure to foreign currency movements.

The majority of OPG's revenues are derived from sales through the IESO-administered spot market. Although the credit exposure to the IESO represents a significant portion of OPG's accounts receivable, the Company's management accepts this risk due to the IESO's primary role in the Ontario electricity market. The remaining receivables exposure is to a diverse group of generally high quality counterparties. OPG's allowance for doubtful accounts as at December 31, 2014 was less than \$1 million.

		2014				
(millions of dollars except where noted)	Notional Quantity	Terms	Fair Value	Balance Sheet Line Item		
As at December 31, 2014						
Derivative embedded in the Bruce Lease	n/a	5 years	(302)	Long-term accounts payable and accrued charges		
Other derivative instruments	various	various	11	Various		
Total derivatives			(291)			

The following is a summary of OPG's derivative instruments:

	2013						
(millions of dollars except where noted)	Notional Quantity	Terms	Fair Value	Balance Sheet Line Item			
Derivative embedded in the Bruce Lease	n/a	6 years	(346)	Long-term accounts payable and accrued charges			
Other derivative instruments	various	various	(8)	Various			
Total derivatives			(354)				

The following table shows the amount related to derivatives recorded in AOCL and income for the years ended December 31:

(millions of dollars)	2014	2013
Cash flow hedges (recorded in AOCL)		
(Loss) gain in OCI	(3)	17
Reclassification of losses to net interest expense	19	18
Reclassification of gains to fuel expense	(3)	(3)
Commodity derivatives (recorded in income)		( )
Realized losses in revenue	(11)	(7)
Unrealized gains (losses) in revenue	9	(4)
Embedded derivative (recorded in income)		. ,
Unrealized gains (losses) in revenue <sup>1</sup>	44	(33)

<sup>1</sup> Excludes the impact of the Bruce Lease Net Revenues Variance Account.

Existing net losses of \$20 million deferred in AOCL as at December 31, 2014 are expected to be reclassified to net income within the next 12 months.

### 13. FAIR VALUE MEASUREMENTS

OPG is required to classify fair value measurements using a fair value hierarchy. This hierarchy groups financial assets and liabilities into three levels, based on the significance of inputs used in measuring the fair value of the financial assets and liabilities. The level within which the financial asset or liability is classified is determined based on the attribute of significance to the inputs to the fair value measurement. The fair value hierarchy has the following levels:

- Level 1: Valuation of inputs is based on unadjusted quoted market prices observed in active markets for identical assets or liabilities.
- Level 2: Valuation is based on inputs other than quoted prices under Level 1 that are observable for the asset or liability, either directly or indirectly.
- Level 3: Valuation is based on inputs for the asset or liability that are not based on observable market data.

The fair value of financial instruments traded in active markets is based on quoted market prices at the consolidated balance sheet dates. A market is regarded as active if quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service, or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis. The quoted market price used for financial assets held by OPG is the current bid price. These instruments are included in Level 1 and are comprised primarily of equity investments and fund investments.

For financial instruments for which quoted market prices are not directly available, fair values are estimated using forward price curves developed from observable market prices or rates. The estimation of fair value may include the use of valuation techniques or models, based wherever possible on assumptions supported by observable market

prices or rates prevailing at the consolidated balance sheet dates. This is the case for over-the-counter derivatives and securities, which include energy commodity derivatives, foreign exchange derivatives, interest rate swap derivatives, and fund investments. Pooled fund investments are valued at the unit values supplied by the pooled fund administrators. The unit values represent the underlying net assets at fair values, determined using closing market prices. Valuation models use general assumptions and market data and therefore do not reflect the specific risks and other factors that would affect a particular instrument's fair value. The methodologies used for calculating the fair value adjustments are reviewed on an ongoing basis to ensure that they remain appropriate. If all significant inputs required to fair value an instrument are observable, the instrument is included in Level 2.

If one or more of the significant inputs is not based on observable market data, the instrument is included in Level 3. Specific valuation techniques are used to value these instruments. Significant Level 3 inputs include: recent comparable transactions, comparable benchmark information, bid/ask spread of similar transactions, and other relevant factors.

Transfers into, out of, or between levels are deemed to have occurred on the date of the event or change in circumstances that caused the transfer to occur.

The Company is required to determine the fair value of all its financial instruments. The following is a summary of OPG's financial instruments as at December 31:

		Fair Value		'ying ue ¹		
(millions of dollars)	2014	2013	2014	2013	Balance Sheet Line Item	
Nuclear fixed asset removal and nuclear waste management funds (includes current portion)	14,379	13,496	14,379	13,496	Nuclear fixed asset removal and nuclear waste management funds	
Payable related to cash flow hedges	(63)	(56)	(63)	(56)	Long-term accounts payable and accrued charges	
Derivative embedded in the Bruce Lease	(302)	(346)	(302)	(346)	Long-term accounts payable and accrued charges	
Long-term debt (includes current portion)	(6,326)	(5,955)	(5,730)	(5,625)	Long-term debt	
Other financial instruments	19	1	19	1	Various	

<sup>1</sup> The carrying values of other financial instruments included in cash and cash equivalents, receivables from related parties, other accounts receivable and prepaid expenses, and accounts payable and accrued charges approximate their fair values due to the immediate or short-term maturity of these financial instruments.

The fair value of long-term debt instruments is determined based on a conventional pricing model, which is a function of future cash flows, the current market yield curve and term to maturity. These inputs are considered Level 2 inputs.

The following tables present assets and liabilities measured at fair value in accordance with the fair value hierarchy:

		December	<sup>·</sup> 31, 2014	
(millions of dollars)	Level 1	Level 2	Level 3	Total
Assets				
Decommissioning Fund	3,069	2,787	390	6,246
Used Fuel Fund	617	7,444	72	8,133
Other financial instruments	4	5	16	25
Total	3,690	10,236	478	14,404
10101	0,000			,
Liabilities				
Derivative embedded in the Bruce Lease	-	-	(302)	(302)
Other financial instruments	(3)	(3)	-	(6)
Total	(3)	(3)	(302)	(308)
Net assets	3,687	10,233	176	14,096
	3,007	10,235	170	14,000
		December	r 31, 2013	
(millions of dollars)	Level 1	Level 2	Level 3	Total
Assets				
Decommissioning Fund	3,005	2,715	247	5,967
Used Fuel Fund	526	6,961	42	7,529
Other financial instruments	5	3	12	20
	0 500	0.070		
Total	3,536	9,679	301	13,516
	3,536	9,679	301	13,516
Liabilities	3,536	9,679		·
Liabilities Derivative embedded in the Bruce Lease		-	(346)	(346)
Liabilities Derivative embedded in the Bruce Lease Other financial instruments	- (8)	- (11)	(346)	(346) (19)
Liabilities		-		(346)

During the year ended December 31, 2014, there were no transfers between Level 1 and Level 2. In addition, there were no transfers into and out of Level 3.

The following tables present the changes in OPG's assets and liabilities measured at fair value based on Level 3:

(millions of dollars)	Decom- missioning Fund	Used Fuel Fund	Derivative Embedded in the Bruce Lease <sup>1</sup>	Other financial instruments
Opening balance, January 1, 2013	163	13	(392)	13
Unrealized gains included in earnings on nuclear fixed asset removal and nuclear waste management funds <sup>1</sup>	18	3	-	-
Unrealized losses included in revenue	-	-	(33)	(1)
Realized losses included in revenue	(1)	-	-	(2)
Purchases	83	14	-	2
Sales	(3)	-	-	-
Settlements	(13)	12	79	-
Closing balance, December 31, 2013	247	42	(346)	12
Unrealized gains included in earnings on nuclear fixed asset removal and nuclear waste management funds <sup>1</sup>	20	4	-	-
Unrealized gains included in revenue	-	-	44	2
Realized gains (losses) included in revenue	1	-	-	(11)
Purchases	148	28	-	13
Sales	(12)	(2)	-	-
Settlements	(14)	-	-	-
Closing balance, December 31, 2014	390	72	(302)	16

<sup>1</sup> Total gains (losses) exclude the impact of the Bruce Lease Net Revenues Variance Account.

## **Derivative Embedded in the Bruce Lease**

The revenue from the Bruce Lease is reduced in each calendar year where the expected future annual arithmetic average hourly Ontario electricity price falls below \$30/MWh and certain other conditions are met. The conditional reduction to revenue in the future, embedded in the terms of the Bruce Lease, is treated as a derivative.

Due to an unobservable input used in the pricing model of the Bruce Lease embedded derivative, the measurement of the liability is classified within Level 3.

The following table presents the quantitative information about the Level 3 fair value measurement of the Bruce Lease embedded derivative as at December 31, 2014:

(millions of dollars except where noted)	Fair Value	Valuation Technique	Unobservable Input	Range
		Technique	input	Range
Derivative embedded in the Bruce Lease	(302)	Option model	Risk Premium <sup>1</sup>	0% - 30%

<sup>1</sup> Represents the range of premiums used in the valuation analysis that OPG has determined market participants would use when pricing the derivative.

The term related to the derivative embedded in the Bruce Lease is based on the remaining service lives, for accounting purposes, for certain units of the Bruce generating stations. As at December 31, 2014, the estimated service life, for accounting purposes, of these Bruce units is to 2019. OPG's exposure to changes in the fair value of the Bruce Lease embedded derivative is mitigated as part of the OEB regulatory process, since the revenue from the lease of the Bruce generating stations is included in the determination of regulated prices and is subject to the Bruce Lease Net Revenues Variance Account. As such, the income statement impact of changes in the derivative liability is offset by the income statement impact of the Bruce Lease Net Revenues Variance Account.

## **Decommissioning Fund and Used Fuel Fund**

Nuclear Funds investments classified as Level 3 consist of real estate and infrastructure investments within the alternative investment portfolio. The fair value of the investments within the Nuclear Funds' alternative investment portfolio is determined using appropriate valuation techniques, such as recent arm's length market transactions, reference to current fair values of other instruments that are substantially the same, discounted cash flow analyses, third-party independent appraisals, valuation multiples, or other valuation methods. Any control, size, liquidity or other discounts or premiums on the investments are considered in the determination of fair value.

The process of valuing investments for which no published market price exists is based on inherent uncertainties and the resulting values may differ from values that would have been used had a ready market existed for the investments. The values may also differ from the prices at which the investments may be sold.

The following are the classes of investments within the Nuclear Funds that are reported on the basis of net asset value as at December 31, 2014:

(millions of dollars except where noted)	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice
Infrastructure	496	262	n/a	n/a
Real Estate	507	256	n/a	n/a
Pooled Funds				
Short-term Investments	18	n/a	Daily	1 - 5 Days
Fixed Income	585	n/a	Daily	1 - 5 Days
Equity	690	n/a	Daily	1 - 5 Days
Total	2,296	518		

The fair value of the above investments is classified as either Level 2 or Level 3.

### Infrastructure

This class includes investments in funds whose investment objective is to generate a combination of long-term capital appreciation and current income generally through investments such as energy, transportation and utilities.

The fair values of investments in this class have been estimated using the Nuclear Funds' ownership interest in partners' capital and/or underlying investments held by subsidiaries of an infrastructure fund.

The investments in the respective infrastructure funds are not redeemable. However, the Nuclear Funds may transfer any of its partnership interests/shares to another party, as stipulated in the partnership agreements and/or shareholders' agreements. Distributions from each infrastructure fund will be received based on the operations of the underlying investments and/or as the underlying investments of the infrastructure funds are liquidated. It is not possible to estimate when the underlying assets of the infrastructure funds will be liquidated. However, the infrastructure funds have a maturity end period ranging from 2019 to 2025.

# Real Estate

This class includes investment in institutional-grade real estate property located in Canada. The investment objective is to provide a stable level of income with the opportunity for long-term capital appreciation.

The fair values of the investments in this class have been estimated using the net asset value of the Nuclear Funds' ownership interest in these investments.

The partnership investments are not redeemable. However, the Nuclear Funds may transfer any of their partnership interests to another party, as stipulated in the partnership agreement, with prior written consent of the other limited partners. For investments in private real estate corporations, shares may be redeemed through a pre-established redemption process. It is not possible to estimate when the underlying assets in this class will be liquidated.

# Pooled Funds

This class represents investments in pooled funds, which primarily include a diversified portfolio of fixed income securities, issued mainly by Canadian corporations and diversified portfolios of Emerging Market listed equity. The investment objective of the pooled funds is to achieve capital appreciation and income through professionally managed portfolios.

The fair value of the investments in this class has been estimated using the net asset value per share of the investments.

There are no significant restrictions on the ability to sell investments in this class.

# 14. COMMON SHARES

As at December 31, 2014 and 2013, OPG had 256,300,010 common shares issued and outstanding at a stated value of \$5,126 million. OPG is authorized to issue an unlimited number of common shares without nominal or par value. Any issue of new shares is subject to the consent of OPG's shareholder.

# **15. COMMITMENTS AND CONTINGENCIES**

# Litigation

Various legal proceedings are pending against OPG or its subsidiaries covering a wide range of matters that arise in the ordinary course of its business activities.

On August 9, 2006, a Notice of Action and Statement of Claim filed with the Ontario Superior Court of Justice in the amount of \$500 million was served against OPG and Bruce Power L.P. by British Energy Limited and British Energy International Holdings Limited (together British Energy). The action is for contribution and indemnity of any amounts British Energy was liable for in an arbitration against it by some of the owners of Bruce Power L.P. regarding an alleged breach of British Energy's representations and warranties to the claimants when they purchased British Energy's interest in Bruce Power L.P. (the Arbitration). Both the action and the Arbitration relate to corrosion to a steam generator unit discovered after OPG leased the Bruce nuclear generating stations to Bruce Power L.P.

In 2012, the arbitrator found that British Energy was liable to the claimants for some of the damages they claimed. The final settlement amount was valued by British Energy at \$71 million. In September 2014, British Energy amended its Statement of Claim (Amended Claim) to reduce the claim amount to \$100 million to reflect that the purchasers of British Energy's interest in Bruce Power L.P. did not receive the full damages they originally claimed in the Arbitration. British Energy also added an allegation to its Amended Claim that OPG breached a covenant to maintain the steam generator between the time of the initial agreement to lease and the effective date of the lease in accordance with "Good Utility Practices".

Certain First Nations have commenced actions against OPG for interference with their respective reserve and traditional land rights. As well, OPG has been brought into certain actions by the First Nations against other parties as a third party defendant.

Each of these matters is subject to various uncertainties. Some of these matters may be resolved unfavourably. While it is not possible to determine the ultimate outcome of the various pending actions, it is the Company's belief that their resolution is not likely to have a material adverse impact on its financial position.

### Environmental

Current operations are subject to regulation with respect to emissions to air, water, and land as well as other environmental matters by federal, provincial, and local authorities. The cost of obligations associated with current operations is provided for on an ongoing basis. Management believes it has made adequate provision in the consolidated financial statements to meet certain other environmental obligations. As at December 31, 2014, OPG's environmental liabilities were \$15 million (2013 – \$15 million).

## Guarantees

The Company and its joint venture partners have jointly guaranteed the financial performance of jointly owned entities related primarily to the payment of liabilities. As at December 31, 2014, the total amount of guarantees OPG provided to these entities was \$78 million. OPG may terminate some of these guarantees within a short time frame by providing written notice to the counterparties at any time. Other guarantees have terms ending between 2019 and 2029. As at December 31, 2014, the potential impact of the fair value of these guarantees to income has been estimated to be negligible and OPG does not expect to make any payments associated with these guarantees.

### **Contractual and Commercial Commitments**

OPG's contractual obligations and other significant commercial commitments as at December 31, 2014, are as follows:

(millions of dollars)	2015	2016	2017	2018	2019	Thereafter	Total
Contractual obligations:							
Fuel supply agreements	193	172	154	134	51	109	813
Contributions under the Ontario Nuclear Funds Agreement <sup>1</sup>	143	150	163	193	288	2,418	3,355
Pension contributions to the OPG registered pension plan <sup>2</sup>	364	370	-	-	-	-	734
Long-term debt repayment	503	273	1,103	398	368	3,085	5,730
Interest on long-term debt	261	249	230	174	155	1,986	3,055
Unconditional purchase obligations	97	8	-	-	-	-	105
Operating lease obligations	16	15	15	13	12	65	136
Commitments related to Darlington Refurbishment <sup>3</sup>	150	-	-	-	-	-	150
Operating licence	22	23	23	18	19	-	105
Accounts payable	295	-	-	-	-	-	295
Other	125	19	14	5	60	9	232
	2,169	1,279	1,702	935	953	7,672	14,710
Significant commercial commitments:							
Lower Mattagami River project	95	-	-	-	-	-	95
Total	2,264	1,279	1,702	935	953	7,672	14,805

<sup>1</sup> Contributions under the Ontario Nuclear Funds Agreement (ONFA) are based on the 2012 ONFA Reference Plan contribution schedule approved in 2012.

<sup>2</sup> The pension contributions include ongoing funding requirements and additional funding requirements towards the deficit, in accordance with the actuarial valuation of the OPG registered pension plan as at January 1, 2014. The next actuarial valuation of the OPG registered pension plan as at January 1, 2017. The pension contributions are affected by various factors including market performance, changes in actuarial assumptions, plan experience, changes in the pension regulatory environment, and the timing of funding valuations. Funding requirements after 2017 for the OPG registered pension plan are excluded due to significant variability in the assumptions required to project the timing of future cash flows. The amount of OPG's additional voluntary contribution, if any, is revisited from time to time.

<sup>3</sup> Estimated currently committed costs to close the project, including demobilization of project staff and cancellation of existing contracts and material orders.

## Lower Mattagami

The Lower Mattagami River project increased the capacity of the four generating stations on the Lower Mattagami River by 438 MW. As of December 31, 2014, all six new units were placed in-service. The capital project expenditures for the year ended December 31, 2014 were \$387 million and the life-to-date expenditures were \$2.4 billion. The project budget of \$2.6 billion includes the design-build contract, as well as contingencies, interest, and other OPG costs, including project management, contract management, impact agreements with First Nations, and transmission connection costs. The remaining contractual commitments for the project relate to project completion activities.

# Darlington Refurbishment

As of December 31, 2014, OPG has issued contracts valued at over \$2 billion related to the refurbishment of the Darlington nuclear station. Some of these contracts relate to work to be completed in the current planning phase, scheduled to end in 2015, while others are for work that will be performed in the execution phase of the project. These contracts contain suspension and termination provisions. The most significant contracts include the Retube and Feeder Replacement (RFR) contract, and the Turbine Generator contract. Significant contracts awarded to-date are as follows:

- In February 2014, OPG awarded the Turbine Generator contract for engineering integration and field installation, valued at approximately \$200 million.
- In March 2013, OPG awarded the Turbine Generator contract for equipment supply and technical services, valued at approximately \$350 million.
- In March 2012, OPG awarded a RFR contract, with an estimated value at over \$600 million.

Capital project expenditures for 2014 were \$696 million and the life-to-date capital expenditures as at December 31, 2014 were \$1,462 million. A budget and schedule for the refurbishment of the four units are expected to be completed in 2015.

# Lease Commitments

The Company is party to various leases for real estate and equipment under operating lease arrangements. Real estate and transport equipment base rent expense for the year ended December 31, 2014 was \$11 million (2013 – \$15 million).

The Company leases Bruce A and B nuclear generating stations to Bruce Power L.P. until 2018, with Bruce Power L.P. having an option to renew for up to 25 years thereafter.

As per *Ontario Regulation 53/05* pursuant to the *Ontario Energy Board Act, 1998*, the difference between OPG's revenues, including lease revenues, and costs, including depreciation expense, associated with its ownership of the Bruce A and B nuclear generating stations is included in the determination of OPG's nuclear regulated prices established by the OEB. These revenues and costs are determined on the basis of the manner in which they are recognized in OPG's consolidated financial statements. As the assets on lease to Bruce Power L.P. are not prescribed facilities under *Ontario Regulation 53/05*, the net book value of the assets is not included in the regulated rate base.

During 2014, OPG recorded lease revenue related to the Bruce generating stations of \$258 million (2013 – \$176 million), which included supplemental rent from Bruce Power L.P. of \$207 million (2013 – \$125 million). The amount of supplemental rent shown in 2013 was net of a contractually required rebate of \$79 million. The net book value of property, plant and equipment on lease to Bruce Power L.P. as at December 31, 2014 was \$1,755 million (2013 – \$1,859 million).

## Other Commitments

The Company maintains labour agreements with the Power Workers' Union (PWU) and the Society of Energy Professionals (The Society). As at December 31, 2014, OPG had approximately 9,700 regular employees and about 89 percent of its regular labour force was covered by the collective bargaining agreements. The current collective agreement between OPG and the PWU has a three-year term, which expires on March 31, 2015. The Company's current collective agreement with The Society was established through an arbitration award issued on April 8, 2013. This agreement has a three-year term, which expires on December 31, 2015. The Society filed a Judicial Review Application in the second quarter of 2013 to the Superior Court of Ontario in the matter of the arbitration award. The case was heard at Divisional Court on October 30, 2014 and a ruling was issued November 27, 2014 dismissing the Society's application. On December 11, 2014, the Society filed a motion for leave to appeal the Divisional Court ruling. The motion has been heard and a decision is expected in the next few months.

Contractual and commercial commitments as noted exclude certain purchase orders, as they represent purchase authorizations rather than legally binding contracts, and are subject to change without significant penalties.

# 16. BUSINESS SEGMENTS

Effective January 1, 2014, OPG revised the composition of its reportable business segments to reflect changes in its generation portfolio and internal reporting. These changes primarily reflect 48 of OPG's hydroelectric generating facilities which were prescribed for rate regulation beginning in 2014, and ending the use of coal at the Nanticoke and Lambton generating stations in 2013. OPG's reportable business segments, effective January 1, 2014, are as follows:

- Regulated Nuclear Generation
- Regulated Nuclear Waste Management
- Regulated Hydroelectric
- Contracted Generation Portfolio
- Services, Trading, and Other Non-Generation.

OPG's Regulated – Nuclear Generation and Regulated – Nuclear Waste Management segments are unchanged.

# Regulated – Nuclear Generation Segment

OPG's Regulated – Nuclear Generation business segment operates in Ontario, generating and selling electricity from the nuclear generating stations that it owns and operates. The business segment includes electricity generated by the Pickering and Darlington Nuclear generating stations. This business segment also includes revenue under the terms of a lease arrangement and related agreements with Bruce Power L.P. related to the Bruce Nuclear generating stations. This revenue includes lease revenue and revenue from heavy water sales and services such as detritiation. Revenue is also earned from isotope sales and ancillary services. Ancillary revenues are earned through voltage control and reactive support. Revenues under the agreements with Bruce Power and from isotope sales and ancillary services are included by the OEB in the determining of the regulated prices for OPG's nuclear facilities, which has the effect of reducing OPG's nuclear regulated prices.

# Regulated – Nuclear Waste Management Segment

OPG's Regulated – Nuclear Waste Management segment engages in the management of nuclear used fuel and L&ILW, the decommissioning of OPG's nuclear generating stations (including the stations on lease to Bruce Power L.P.), the management of the Nuclear Funds, and related activities including the inspection and maintenance of the waste storage facilities. Accordingly, accretion expense on the Nuclear Liabilities and earnings from the Nuclear Funds are reported under this segment.

As the nuclear generating stations operate over time, OPG incurs variable costs related to used nuclear fuel bundles and L&ILW which increase the Nuclear Liabilities. OPG charges these variable costs to current operations in the Regulated – Nuclear Generation segment to reflect the cost of producing energy and earning revenue under the Bruce Power lease arrangement and related agreements. Since variable costs increase the Nuclear Liabilities in the Regulated – Nuclear Waste Management segment, OPG records an inter-segment charge between the Regulated – Nuclear Generation and the Regulated – Nuclear Waste Management segments. The impact of the inter-segment charge is eliminated on OPG's consolidated statements of income and balance sheets.

The Regulated – Nuclear Waste Management segment is considered regulated because the costs associated with the Nuclear Liabilities are included by the OEB in determining regulated prices for production from OPG's regulated nuclear facilities.

### **Regulated – Hydroelectric Segment**

OPG's Regulated – Hydroelectric business segment operates in Ontario, generating and selling electricity from most of the Company's hydroelectric generating stations. The business segment includes the results of the Sir Adam Beck 1, 2 and Pump generating station (GS), DeCew Falls 1 and 2, and the R.H. Saunders hydroelectric facilities. This segment also includes the results of the 48 newly regulated hydroelectric stations. The OEB's order, issued in December 2014, established regulated prices for these assets effective November 1, 2014. The comparative information for these 48 hydroelectric stations, previously reported under the Unregulated – Hydroelectric segment in OPG's 2013 annual MD&A and consolidated financial statements, has been reclassified to conform to this new presentation.

### **Contracted Generation Portfolio Segment**

The Contracted Generation Portfolio business segment operates in Ontario, generating and selling electricity from the Company's generating stations that are not prescribed for rate regulation. The segment primarily includes generating facilities that are under an ESA with the IESO or other long-term contracts.

Activities of generating stations that are not currently subject to a contract or rate regulation, but are available to generate electricity for sale, if required, are also included in the Contracted Generation Portfolio segment. Since the Lambton GS and Nanticoke GS were generating electricity up to the end of 2013, the activities related to these stations for the comparative period are reported in the Contracted Generation Portfolio segment. These stations ended coal-fired operations as a result of a Shareholder declaration issued in March 2013 mandating that OPG end the use of coal at these stations by the end of 2013. Therefore, effective January 1, 2014, the activities related to the Lambton GS and Nanticoke GS are reported under the Services, Trading, and Other Non-Generation business segment. The comparative information for the unregulated generating stations, previously reported under the Unregulated – Hydroelectric and Unregulated – Thermal segments in OPG's 2013 annual MD&A and consolidated financial statements, has been reclassified to conform to this new presentation.

The Contracted Generation Portfolio segment also includes OPG's share of equity income from its 50 percent ownership interests in the PEC and Brighton Beach stations. OPG's share of the in-service generating capacity and generation volume from its interests in the PEC and Brighton Beach stations are also included in this segment.

#### Services, Trading, and Other Non-Generation Segment

The Services, Trading, and Other Non-Generation segment is a non-generation segment that is not subject to rate regulation. It includes the revenue and expenses related to OPG's trading and other non-hedging activities. As part of these activities, OPG transacts with counterparties in Ontario and neighbouring energy markets in predominantly short-term trading activities of typically one year or less in duration. These activities relate to electricity that is purchased and sold at the Ontario border, financial energy trades, sales of financial risk management products, and sales of energy-related products. In addition, OPG has a wholly owned trading subsidiary that transacts solely in the United States market. All contracts that are not designated as hedges are recorded as assets or liabilities at fair

value, with changes in fair value recorded in the revenue of this segment. In addition, this segment includes revenue from real estate rentals and other unregulated service revenues. The above activities were previously reported in the Other category.

OM&A expenses of the generation business segments include an inter-segment service fee for the use of certain property, plant and equipment, and intangible assets held within the Services, Trading and Other Non-Generation segment. The total service fee is recorded as a reduction to the segment's OM&A expenses.

The service fee included in OM&A expenses by segment in 2014 and 2013 was as follows:

(millions of dollars)	2014	<b>2013</b> (adjusted)
Regulated – Nuclear Generation Regulated – Hydroelectric	23	23
Contracted Generation Portfolio Services, Trading, and Other Non-Generation	3 (32)	4 6 (33)

Information for the comparative period has been adjusted to reflect the changes to OPG's reportable business segments and is labeled "adjusted".

Segment Income		Regulated		Unreg	ulated		
(Loss) for the		Nuclear Waste		Controctod	Services,		
Year Ended December 31, 2014	Nuclear	Manage-	Hydro-	Contracted Generation	Trading, and Other Non-		
(millions of dollars)	Generation	ment	electric	Portfolio	Generation	Elimination	Total
<u>(</u>							
Revenue	3,015	121	1,417	329	197	(116)	4,963
Fuel expense	258	-	343	37	3	-	641
Gross margin	2,757	121	1,074	292	194	(116)	4,322
Operations,	1,983	129	325	175	119	(116)	2,615
maintenance and							
administration				••			
Depreciation and	529	-	167	38	20	-	754
amortization		700		•	-		707
Accretion on fixed	-	782	-	8	7	-	797
asset removal and							
nuclear waste							
management liabilities							
Earnings on nuclear	_	(714)	_	_	_	_	(714)
fixed asset removal	_	(714)	-	_	_	-	(114)
and nuclear waste							
management funds							
Regulatory	-	-	77	-	-	-	77
disallowance related							
to the Niagara Tunnel							
project							
Income from	-	-	-	(41)	-	-	(41)
investments subject							
to significant influence							
Property taxes	28	-	1	(1)	4	-	32
Restructuring	-	-	-	8	10	-	18
Other loss (income)	-	-	2	(6)	1	-	(3)
Income (loss) before							
interest, income							
taxes, and	047	(70)	500	444	00		707
extraordinary item	217	(76)	502	111	33	-	787

Segment (Loss) Income for the	F	Regulated		Unreg	gulated		
Year Ended December 31, 2013 (millions of dollars) (adjusted)	Nuclear Generation	Nuclear Waste Manage- ment	Hydro- electric	Contracted Generation Portfolio	Services, Trading, and Other Non- Generation	Elimination	Total
Revenue	2,889	113	1,236	657	77	(109)	4,863
Fuel expense	237	-	344	127	-	-	708
Gross margin Operations, maintenance and administration	2,652 2,022	113 121	892 298	530 408	77 7	(109) (109)	4,155 2,747
Depreciation and amortization	626	-	186	132	19	-	963
Accretion on fixed asset removal and nuclear waste management liabilities	-	742	-	14	-	-	756
Earnings on nuclear fixed asset removal and nuclear waste management funds	-	(628)	-	-	-		(628)
Income from investments subject to significant influence	-	-	-	(35)	-	-	(35)
Property taxes	29	-	(1)	14	11	-	53
Restructuring	-	-	-	50	-	-	50
Other loss (income)	(1)	-	4	(4)	(2)	-	(3)
(Loss) income before interest, income taxes, and							
extraordinary items	(24)	(122)	405	(49)	42	-	252

Selected Consolidated		Regulated		Unreg	gulated	
Balance Sheet Information as at December 31, 2014		Nuclear Waste		Contracted	Services, Trading, and	
(millions of dollars)	Nuclear Generation	Manage- ment	Hydro- electric	Generation Portfolio	Other Non- Generation	Total
Segment property, plant and	4,679	-	7,483	3,267	338	15,767
equipment in-service, net Segment construction in progress	1,655	-	86	35	50	1,826
Segment property, plant and equipment, net	6,334	-	7,569	3,302	388	17,593
Segment intangible assets in-service, net	11	-	1	4	14	30
Segment development in progress	2	-	1	-	43	46
Segment intangible assets, net	13	-	2	4	57	76
Segment fuel inventory	298	-	-	36	-	334
Segment materials and supplies inventory, net:						
Current	93	-	-	1	-	94
Long-term	332	-	1	5	-	338
Nuclear fixed asset removal and nuclear waste management funds (current and non-current portions)	-	14,379				14,379
Fixed asset removal and nuclear waste management liabilities	-	(16,663)	-	(333)	(32)	(17,028)

Selected Consolidated Balance Sheet Information	Regulated			Unreg		
as at December 31, 2013 (millions of dollars) (adjusted)	Nuclear Generation	Nuclear Waste Manage- ment	Hydro- electric	Contracted Generation Portfolio	Services, Trading, and Other Non- Generation	Total
Segment property, plant and equipment in-service, net	4,864	-	7,624	921	189	13,598
Segment construction in progress	866	-	81	2,150	43	3,140
Segment property, plant and equipment, net	5,730	-	7,705	3,071	232	16,738
Segment intangible assets in-service, net	15	-	1	4	17	37
Segment development in progress	2	-	-	-	20	22
Segment intangible assets, net	17	-	1	4	37	59
Segment fuel inventory	334	-	-	56	-	390
Segment materials and supplies inventory, net:						
Current	94	-	-	1	-	95
Long-term	322	-	1	7	-	330
Nuclear fixed asset removal and nuclear waste management funds (current and non-current portions)	-	13,496	-	-	-	13,496
Fixed asset removal and nuclear waste management liabilities	-	(15,903)	-	(322)	(32)	(16,257)

Selected Consolidated Cash	Regulated			Unregulated		
Flow Information				Services,		
(millions of dollars)	Nuclear Generation	Nuclear Waste Management	Hydro- electric	Contracted Generation Portfolio	Trading, and Other Non- Generation	Total
Year ended December 31, 2014 Investment in property, plant and equipment, and intangible assets	991		84	423	47	1,545
Year ended December 31, 2013 <i>(adjusted)</i> Investment in property, plant and equipment, and intangible assets	633	_	172	724	39	1,568

## 17. NET CHANGES IN NON-CASH WORKING CAPITAL BALANCES

(millions of dollars)	2014	2013
Receivables from related parties	(80)	40
Other accounts receivable and prepaid expenses	15	(21)
Fuel inventory	56	115
Income taxes payable/recoverable	75	12
Materials and supplies	1	(5)
Accounts payable and accrued charges	145	98
	212	239

## 18. RELATED PARTY TRANSACTIONS

Given that the Province owns all of the shares of OPG, related parties include the Province and successor entities of Ontario Hydro, including Hydro One Inc. (Hydro One), the IESO, and the OEFC, and jointly controlled entities. The transactions between OPG and related parties are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties.

These transactions for the years ended December 31 are summarized below:

	:	2014		2013	
(millions of dollars)	Revenue	Expenses	Revenue	Expenses	
Hydro One					
Electricity sales	23	-	15	-	
Services	1	13	-	14	
Province of Ontario					
Decommissioning Fund excess funding	-	476	-	560	
Used Fuel Fund rate of return guarantee	-	439	-	755	
Gross revenue charges	-	123	-	124	
ONFA guarantee fee	-	8	-	8	
Pension benefits guarantee fee	-	2	-	1	
OEFC					
Gross revenue charges	-	209	-	208	
Interest expense on long-term notes	-	187	-	187	
Income taxes, net of investment tax credits	-	136	-	28	
Contingency support agreement	83	-	360	-	
Capital tax	-	-	-	1	
IESO					
Electricity related revenue	4,305	75	4,015	62	
	4,412	1,668	4,390	1,948	

The receivable and payable balances, as at December 31, between OPG and its related parties are summarized below:

(millions of dollars)	2014	2013
Receivables from related parties		
Hydro One	1	2
IESO	468	331
OEFC	10	67
PEC	3	2
Accounts payable and accrued charges		
Hydro One	8	3
OEFC	63	65
Province of Ontario	3	2

## **19. INVESTMENTS SUBJECT TO SIGNIFICANT INFLUENCE**

Investments subject to significant influence consist of OPG's 50 percent ownership interest in the jointly controlled entities of PEC and Brighton Beach, which are accounted for using the equity method as described in Note 3. Details of the balance included in the consolidated balance sheets as at December 31 are as follows:

(millions of dollars)	2014	2013
PEC		
Current assets	15	19
Long-term assets	287	303
Current liabilities	(5)	(15)
Long-term liabilities	(4)	(4)
Brighton Beach		
Current assets	6	5
Long-term assets	186	196
Current liabilities	(13)	(11)
Long-term liabilities	(6)	(5)
Long-term debt	(118)	(129)
Investments subject to significant influence	348	359

## 20. RESEARCH AND DEVELOPMENT

For the year ended December 31, 2014, research and development expenses of \$84 million (2013 – \$104 million) were charged to operations.

#### 21. RESTRUCTURING

In response to the Ministry of Energy's Long-Term Energy Plan, Supply Mix Directive and various other directives, OPG has been undertaking restructuring activities since 2011 pertaining to the closure of its coal-fired generating units at the Lambton GS, Nanticoke GS, Atikokan GS and Thunder Bay GS. These activities have an impact on staff requirements and require OPG to record the corresponding restructuring costs.

In December 2013, the Minister of Energy issued a Directive to the former OPA to negotiate and enter into a contract for electricity from one unit at the Thunder Bay GS using advanced biomass fuel. The resulting impact on staff requirements has been finalized during 2014. The total severance costs related to the Thunder Bay GS are estimated to be \$8 million and were recorded during the second and third quarters of 2014. Additional severance costs of \$4 million related to the Lambton and Nanticoke generating stations were also recorded during 2014. Relocation costs of \$6 million were recorded as incurred during 2014.

OPG conducted discussions with key stakeholders, including The Society and the PWU, in accordance with their respective collective bargaining agreements, at all plants impacted to date by the regulation requiring the cessation of coal-fired electricity generation. Given collective agreement provisions allowing deferral of severance payout to future periods, the restructuring liability is expected to be fully drawn down by 2017.

The change in the restructuring liability during 2014 and 2013 is as follows:

(millions of dollars)	
Liability, beginning of year	3
Restructuring charges during the year	50
Payments during the year	(13)
Liability, December 31, 2013	40
Restructuring charges during the year	18
Payments during the year	(41)
Liability, end of year	17

#### 22. NON-CONTROLLING INTEREST

Lower Mattagami Limited Partnership (LMLP) is an Ontario limited partnership between OPG, Amisk-oo-Skow Finance Corporation (AFC), a corporation wholly owned by the Moose Cree First Nation, and LM Extension Inc., a wholly owned subsidiary of OPG. The principal business of LMLP is the development, construction, ownership, operation and maintenance of hydroelectric generating facilities located on the Lower Mattagami River. As incremental units are placed in-service, the AFC may acquire up to a 25 percent interest in the assets through its investment in LMLP.

During 2014, all six new units constructed as part of the Lower Mattagami River project were declared in-service. Subsequent to the units' in-service dates, the AFC made contributions of \$141 million to acquire their equity interest in LMLP, through the settlement of existing liabilities, including long-term debt. As of December 31, 2014, the AFC had a 25 percent interest in LMLP. OPG consolidates the results of LMLP in its consolidated financial statements and the non-controlling interest represents the AFC's equity interest in LMLP.

Filed: 2016-05-27, EB-2016-0152 Exhibit A2-1-1, Attachment 2 Page 172 of 174

# **OPG OFFICERS**



BERNARD LORD Board Chair



TOM MITCHELL President and Chief Executive Officer



BRUCE BOLAND Senior Vice President, Commercial Operations and Environment



BARB KEENAN Senior Vice President, People and Culture



CARLO CROZZOLI Senior Vice President, Corporate Business Development and Chief Risk Officer



MIKE MARTELLI Senior Vice President, Hydro – Thermal Operations



DAVID KAPOSI Vice President, Chief Investment Officer



CHRIS GINTHER Senior Vice President, Law, General Counsel and Chief Ethics Officer



SCOTT MARTIN Senior Vice President, Business and Administrative Services



CATRIONA KING Vice President, Corporate Secretary and Executive Operations



GLENN JAGER

and Chief Nuclear

Officer

President, OPG Nuclear

DIETMAR REINER Senior Vice President, Nuclear Projects



JOHN LEE Vice President, Treasurer



BETH SUMMERS Senior Vice President, Chief Financial Officer

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## **OPG GENERATION FACILITIES** 65 \*\* 2 🕸 2 🕸 3 🔬 Nuclear Thermal Hydroelectric Wind Power Leased Co-owned Stations Stations \* Gas-Fired Stations\*\* Stations Turbines **Nuclear Stations** MOOSONEE **ONTARIO** \* KENORA TIMMINS ATIKOKAN THUNDER BAY SAULT STE. MARIE NORTH BAY At Dec. 31, 2014, OPG's electricity ΟΤΤΑΨΑ generating portfolio had an in-service capacity of 17,059 MW. KINGSTON \* Atikokan GS is the largest 100 per cent biomass-fuelled power plant in North America - generating renewable, dispatachable, peak capacity power. ۵ Thunder Bay GS is fuelled using advanced biomass (conversion TORONTO completed Jan. 2015). NIAGARA FALLS \*\* The 550 MW Portlands Energy Centre gas-fired generating station in Toronto (co-owned by OPG and TransCanada Energy Ltd.) and the 580 MW Brighton Beach gas-fired generating station in Windsor (co-owned by OPG and ATCO Power Canada Ltd.). WINDSOR 8

Filed: 2016-05-27, EB-2016-0152 Exhibit A2-1-1, Attachment 2 Page 174 of 174



# 2014 ANNUAL REPORT

This annual report is also available in French on our website Ce rapport est également publié en français sur notre site Web **www.opg.com** 

**Ontario Power Generation Inc. Head Office is located at** 700 University Avenue, Toronto, Ontario M5G 1X6; Telephone (416) 592-2555 or (877) 592-2555.

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700 University Avenue Toronto, ON M5G 1X6

Tel: 416-592-4008 or 1-800-592-4008 Fax: 416-592-2178 www.opg.com

March 4, 2016

## **OPG REPORTS 2015 FINANCIAL RESULTS**

## Strong operating and financial results position OPG well for the refurbishment of the Darlington station

**[Toronto]:** – Ontario Power Generation Inc. (OPG or Company) today reported net income attributable to the Shareholder of \$402 million for 2015, down from \$561 million excluding extraordinary gain in 2014. The decreased earnings were mainly a result of the planned four-unit Vacuum Building Outage (VBO) at the Darlington Nuclear Generating Station (GS) in 2015, which reduced nuclear generation and increased operations, maintenance and administration (OM&A) expenses. The decrease in earnings in 2015 was partially offset by the new base regulated prices effective November 2014 and the newly in-serviced hydroelectric units.

"OPG's strong operating and financial performance over the last few years allows us to proceed with confidence in refurbishing our nuclear plant at Darlington," said Jeff Lyash, OPG President and CEO. "Over its additional 30-plus years of operating life, Darlington will provide a reliable supply of clean electricity and is expected to contribute approximately \$50 billion in additional economic benefits to Ontario." Mr. Lyash also noted, "We currently produce about half of Ontario's electricity and our power costs customers approximately 40 per cent less than the rest of the market. Undertaking the Darlington Refurbishment project will allow us to keep moderating overall electricity prices for customers for decades to come and contributes to the Province's climate change goals."

"I am also pleased to continue our record of partnering with Indigenous communities in 2015 as the construction of the Peter Sutherland Sr. GS is being undertaken in partnership with the Taykwa Tagamou Nation."

Mr. Lyash added, "In 2015, OPG again achieved a strong safety performance. As one of the company's fundamental core values, safety is embedded in all that we do. Our goal is zero injuries."

In January 2016, OPG announced that it is ready to deliver on the Government of Ontario's decision to proceed with the refurbishment of the first of four units at Darlington and to pursue continued operations at the Pickering Nuclear GS to 2024, pending necessary approvals. Operating Pickering to 2024 will help provide a reliable supply of baseload electricity while the Darlington units and the units operated by Bruce Power L.P. undergo refurbishment.

Since 2010, OPG has invested more than \$200 million in Pickering to ensure its safe and reliable operation. In 2015, the Pickering Station provided about 14 per cent of

Ontario's power and achieved its highest ever level of reliability. Operating Pickering to 2024 will save electricity customers up to \$600 million, avoid eight million tonnes of greenhouse gas emissions and maintain approximately 4,500 jobs across Durham Region.

## **Generating and Operating Performance**

OPG operates a diverse generation portfolio of nuclear, hydroelectric, and thermal plants that is virtually free of greenhouse gases and smog-causing emissions.

In addition to the impact of the Darlington VBO on generation and OM&A expenses, OPG's net income was lower in 2015 due to higher interest expense, lower electricity trading margins, and higher accretion expense related to fixed asset removal and nuclear waste management liabilities. These were partially offset by higher earnings in 2015 from the new hydroelectric units on the Lower Mattagami River and a write-off of \$77 million in 2014 reflecting a regulatory disallowance of capital costs by the Ontario Energy Board.

Total electricity generated decreased in 2015 to 78.0 terawatt hours (TWh) from 82.2 TWh in 2014. Nuclear production of 44.5 TWh in 2015 represented a decrease of 3.6 TWh compared to 2014, primarily due to the VBO at the Darlington GS, which required the shutdown of all four units from Sep. 14, 2015 to Oct. 30, 2015.

Generation of 30.4 TWh in 2015 from the Regulated – Hydroelectric segment was lower than the 31.3 TWh generated in 2014, mainly due to lower water flows in eastern Ontario. Generation from the Contracted Generation Portfolio increased by 0.3 TWh as a result of higher production from the hydroelectric units on the Lower Mattagami River.

The Darlington Nuclear GS capability factor of 76.9 per cent in 2015 reflected the planned VBO in 2015. The capability factor at the Pickering Nuclear GS increased to 79.4 per cent in 2015 from 75.3 per cent in 2014 mainly due to improved station performance. The Pickering Nuclear GS achieved the best ever reliability performance in the station's history.

OPG's regulated hydroelectric stations achieved an availability factor of 91.2 per cent in 2015 which was comparable to 91.4 per cent in 2014. OPG's contracted hydroelectric stations achieved an availability of 88.6 per cent in 2015 compared to 90.2 per cent in 2014. The reduction mainly reflected a higher number of planned outage days at certain Lower Mattagami River stations. OPG's contracted thermal stations achieved an equivalent forced outage rate of 11.2 per cent in 2015 compared to 8.9 per cent in 2014, mainly due to an outage to perform repair work at the Lennox GS.

## **Generation Development**

OPG is undertaking a number of generation development and life extension projects in support of Ontario's electricity planning initiatives. Significant developments during 2015 were as follows:

**Darlington Refurbishment** 

- The Darlington Refurbishment project is expected to extend the operating life of the station by approximately 30 years. The approved project budget for the four-unit refurbishment is \$12.8 billion including capitalized interest and escalation. Refurbishment work on the first unit is scheduled to commence in October 2016, with the last unit completed by 2026. Life-to-date capital expenditures were \$2,166 million as at Dec. 31, 2015.
- In December 2015, OPG received a ten-year operating licence for the Darlington GS from the Canadian Nuclear Safety Commission (CNSC) – the longest licence ever granted by the CNSC to a Canadian nuclear power plant. The new licence, which will span most of the refurbishment period, is effective from Jan. 1, 2016 to Nov. 30, 2025.

Peter Sutherland Sr. GS

- In March 2015, OPG's Board of Directors approved the construction of a new 28 MW generating station, the Peter Sutherland Sr. GS, on the Abitibi River, with a planned in-service date in the first half of 2018 and a budget of \$300 million. Life-to-date capital expenditures were \$95 million as at Dec. 31, 2015.
- During 2015, OPG executed a hydroelectric energy supply agreement for the station with the Independent Electricity System Operator, and completed financing for the project.
- The station will be constructed through a partnership between OPG and Coral Rapids L.P., a wholly owned subsidiary of the Taykwa Tagamou Nation. This project is OPG's latest partnership with a First Nation community. Past successful partnerships included those with the Moose Cree First Nation for the Lower Mattagami River project and the Lac Seul First Nation for the Lac Seul GS.

Filed: 2016-05-27 EB-2016-0152 Exhibit A2-1-1 Attachment 3 Page 4 of 173

## FINANCIAL AND OPERATIONAL HIGHLIGHTS

millions of dollars – except where noted)	2015	2014
Revenue	5,476	4,963
Fuel expense	687	641
Gross margin	4,789	4,322
Operations, maintenance and administration	2,783	2,615
Depreciation and amortization	1,100	754
Accretion on fixed asset removal and nuclear waste management liabilities	895	797
Earnings on nuclear funds - (a reduction to expenses)	(704)	(714)
Regulatory disallowance related to the Niagara Tunnel project	-	77
Income from investments subject to significant influence	(39)	(41)
Other net expenses	65	47
Income before interest, income taxes, and extraordinary item	689	787
Net interest expense	180	80
Income tax expense	92	139
Income before extraordinary item	417	568
Extraordinary item	-	243
Net income	417	811
Net income attributable to the Shareholder	402	804
Net income attributable to non-controlling interest <sup>1</sup>	15	7
ncome (loss) before interest, income taxes, and extraordinary item		
Electricity generation business segments	912	830
Regulated – Nuclear Waste Management	(186)	(76)
Services, Trading, and Other Non-Generation	(37)	33
Total income before interest, income taxes, and extraordinary item	689	787
ash flow		
	1,465	1,433
Cash flow provided by operating activities	1,405	1,433
lectricity generation (TWh)		
Regulated – Nuclear Generation	44.5	48.1
Regulated – Hydroelectric	30.4	31.3
Contracted Generation Portfolio <sup>2</sup>	3.1	2.8
Total electricity generation	78.0	82.2
uclear unit capability factor (per cent)		
Darlington Nuclear GS	76.9	92.1
Pickering Nuclear GS	79.4	75.3
	-	
<i>vailability (per cent)</i> Regulated – Hydroelectric	91.2	91.4
	91.2 88.6	91.4 90.2
Contracted Generation Portfolio – hydroelectric stations	0.00	90.2
quivalent forced outage rate	44.0	0.0
Contracted Generation Portfolio – thermal stations	11.2	8.9
eturn on Equity Excluding Accumulated Other Comprehensive Income (AOCI) (%) <sup>3</sup>	4.0	8.5
Return on Equity Excluding AOCI and extraordinary gain in 2014 (%) <sup>3</sup>	4.1	6.0
unds from Operations (FFO) Adjusted Interest Coverage (times) <sup>3</sup>	5.0	2.8

1 Relates to the 25% interest of a corporation wholly owned by the Moose Cree First Nation in the Lower Mattagami LP. 2

Includes OPG's share of generation from its 50% ownership interests in the Portlands Energy Centre and Brighton Beach GS. ROE Excluding AOCI and FFO Adjusted Interest Coverage are non-GAAP financial measures and do not have any standardized meaning prescribed by US GAAP. Additional information about these measures is provided in OPG's Management's Discussion and Analysis for the year ended Dec. 31, 2015, under the section, *Supplementary Non-GAAP Financial Measures*. 3

Ontario Power Generation Inc. is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity that is 99.7 per cent free of greenhouse gas and smog-causing emissions. Our focus is on the efficient production and sale of electricity from our generation assets, while operating in a safe, open, environmentally responsible, and commercially sound manner.

Ontario Power Generation Inc.'s audited consolidated financial statements and Management's Discussion and Analysis as at and for the year ended Dec. 31, 2015 can be accessed on OPG's web site (<u>www.opg.com</u>), the Canadian Securities Administrators' web site (<u>www.sedar.com</u>), or can be requested from the Company.

> For further information, please contact: Investor Relations 416-592-6700 1-866-592-6700 investor.relations@opg.com

Media Relations 416-592-4008 1-877-592-4008

- 30 -

Filed: 2016-05-27 EB-2016-0152 Exhibit A2-1-1 Attachment 3 Page 6 of 173

## ONTARIO POWER GENERATION INC. MANAGEMENT'S DISCUSSION AND ANALYSIS DECEMBER 31, 2015



### 2015 YEAR-END REPORT

### TABLE OF CONTENTS

Forward-Looking Statements	2
The Company	3
Revenue Mechanisms for Regulated and Unregulated Generation	4
Highlights	6
Core Business and Strategy	13
Business Segments	26
Key Operating and Financial Performance Indicators	27
Discussion of Operating Results by Business Segment	29
Regulated – Nuclear Generation Segment	29
Regulated – Nuclear Waste Management Segment	30
Regulated – Hydroelectric Segment	31
Contracted Generation Portfolio Segment	32
Services, Trading, and Other Non-Generation Segment	33
Liquidity and Capital Resources	33
Balance Sheet Highlights	37
Critical Accounting Policies and Estimates	39
Changes in Accounting Policies and Estimates	47
Risk Management	50
Related Party Transactions	64
Internal Controls over Financial Reporting and Disclosure Controls	65
Fourth Quarter	66
Quarterly Financial Highlights	68
Supplementary Non-GAAP Financial Measures	70
Corporate Governance	73
Audit and Risk Committee Information	96

## ONTARIO POWER GENERATION INC. MANAGEMENT'S DISCUSSION AND ANALYSIS

This Management's Discussion and Analysis (MD&A) should be read in conjunction with the audited consolidated financial statements and accompanying notes of Ontario Power Generation Inc. (OPG or Company) as at and for the year ended December 31, 2015. OPG's consolidated financial statements are prepared in accordance with United States generally accepted accounting principles (US GAAP) and are presented in Canadian dollars.

As required by *Ontario Regulation 395/11*, as amended, a regulation under the *Financial Administration Act* (Ontario) (FAA), OPG adopted US GAAP for the presentation of its consolidated financial statements, effective January 1, 2012. In 2014, the Ontario Securities Commission (OSC) approved an exemption which allows OPG to apply US GAAP up to January 1, 2019. The term of the exemption is subject to certain conditions, which may result in the expiry of the exemption prior to January 1, 2019. For details, refer to the heading, *Exemptive Relief for Reporting under US GAAP*, in the section *Critical Accounting Policies and Estimates*. This MD&A is dated March 4, 2016.

### FORWARD-LOOKING STATEMENTS

The MD&A contains forward-looking statements that reflect OPG's current views regarding certain future events and circumstances. Any statement contained in this document that is not current or historical is a forward-looking statement. OPG generally uses words such as "anticipate", "believe", "foresee", "forecast", "estimate", "expect", "schedule", "intend", "plan", "project", "seek", "target", "goal", "strategy", "may", "will", "should", "could" and other similar words and expressions to indicate forward-looking statements. The absence of any such word or expression does not indicate that a statement is not forward-looking.

All forward-looking statements involve inherent assumptions, risks and uncertainties, including those set out under the section *Risk Management*. All forward-looking statements could be inaccurate to a material degree. In particular, forward-looking statements may contain assumptions such as those relating to OPG's fuel costs and availability, generating station performance, cost of fixed asset removal and nuclear waste management, performance of investment funds, conversion of coal-fired generating stations, refurbishment of existing facilities, development and construction of new facilities, pension and other post-employment benefit (OPEB) obligations and funds, income taxes, proposed new legislation, the ongoing evolution of the Ontario electricity industry, environmental and other regulatory requirements, health, safety and environmental developments, business continuity events, the weather, applications to the Ontario Energy Board (OEB) for regulatory prices, and the impact of regulatory decisions by the OEB. Accordingly, undue reliance should not be placed on any forward-looking statement. The forward-looking statements included in this MD&A are made only as of the date of this MD&A. Except as required by applicable securities laws, OPG does not undertake to publicly update these forward-looking statements to reflect new information, future events or otherwise.

#### THE COMPANY

OPG is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario. OPG was established under the *Business Corporations Act* (Ontario) (OBCA) and is wholly owned by the Province of Ontario (Province or Shareholder).

As at December 31, 2015, OPG's electricity generation portfolio had an in-service capacity of 17,055 megawatts (MW). OPG operates two nuclear generating stations, three thermal generating stations, 65 hydroelectric generating stations, and one wind power turbine. In addition, OPG and TransCanada Energy Ltd. co-own the 550 MW Portlands Energy Centre (PEC) gas-fired combined cycle generating station (GS). OPG and ATCO Power Canada Ltd. co-own the 560 MW Brighton Beach gas-fired combined cycle GS (Brighton Beach). OPG's 50 percent share of the inservice capacity and generation volume of these co-owned facilities is included in the generation portfolio statistics set out in this report. The income from the co-owned facilities is accounted for using the equity method of accounting, and OPG's share of income is presented as income from investments subject to significant influence in the Contracted Generation Portfolio segment.

OPG also owns two other nuclear generating stations, the Bruce A GS and the Bruce B GS, which are leased on a long-term basis to Bruce Power L.P. (Bruce Power). Income from these leased stations is included in revenue under the Regulated – Nuclear Generation segment. The leased stations are not included in the generation portfolio statistics set out in this report.

#### **OPG's Reporting Structure**

The composition of OPG's reportable business segments is as follows:

- Regulated Nuclear Generation
- Regulated Nuclear Waste Management
- Regulated Hydroelectric
- Contracted Generation Portfolio
- Services, Trading, and Other Non-Generation.

OPG receives regulated prices for electricity generated from most of its hydroelectric facilities and all of the nuclear facilities that it operates. This includes the following facilities (collectively, prescribed facilities or regulated facilities):

- Sir Adam Beck 1, 2 and Pump hydroelectric generating stations
- DeCew Falls 1 and 2 hydroelectric generating stations
- R.H. Saunders hydroelectric GS
- the 48 hydroelectric generating stations that were prescribed for rate regulation effective in 2014, under the amended *Ontario Regulation* 53/05
- Pickering Nuclear GS (Pickering GS)
- Darlington Nuclear GS (Darlington GS).

The operating results related to these regulated facilities are described under the Regulated – Nuclear Generation, Regulated – Nuclear Waste Management, and Regulated – Hydroelectric segments. For the remainder of OPG's operating generating facilities, the operating results are described under the Contracted Generation Portfolio segment. A description of all OPG's segments is provided under the section, *Business Segments*.

#### In-Service Generating Capacity

OPG's in-service generating capacity by business segment as of December 31 was as follows:

(MW)	2015	2014
Regulated – Nuclear Generation	6,606	6,606
Regulated – Hydroelectric	6,428	6,426
Contracted Generation Portfolio <sup>1</sup>	4,021	4,027
Total	17,055	17,059

<sup>1</sup> Includes OPG's share of in-service generating capacity of 275 MW for PEC and 280 MW for Brighton Beach.

The in-service capacity of the Regulated – Nuclear Generation and Regulated – Hydroelectric segments as of December 31, 2015 was largely consistent with the capacity as of December 31, 2014.

During the fourth quarter of 2015, the in-service capacity of the Contracted Generation Portfolio segment decreased by 6 MW. This change was largely due to an adjustment to the capacity for two of the original units at the Kipling GS from 78.5 MW per unit to 76 MW per unit to reflect turbine limit capability.

#### REVENUE MECHANISMS FOR REGULATED AND UNREGULATED GENERATION

#### **Regulated Generation**

The OEB sets the prices for electricity generated from OPG's regulated nuclear and hydroelectric facilities. The following are the OEB-authorized regulated prices for electricity generated from these facilities:

	20	15	2	014
(\$/MWh)	January 1 to June 30	July 1 to December 31	January 1 to October 31	November 1 to December 31
Regulated – Nuclear Generation				
Base regulated price	59.29	59.29	51.52	59.29
Rate riders	1.33	<b>12.17</b> <sup>1</sup>	4.18	4.18
	60.62	71.46	55.70	63.47
Regulated – Hydroelectric				
Hydroelectric generating stations prescribed for rate regulation prior to 2014				
Base regulated price	40.20	40.20	35.78	40.20
Rate riders	6.04	<b>9.23</b> <sup>1</sup>	2.02	2.02
	46.24	49.43	37.80	42.22
Hydroelectric generating stations prescribed for rate regulation effective in 2014				
Base regulated price	41.93	41.93	N/A	41.93
Rate rider	-	3.19 <sup>1</sup>	N/A	-
	41.93	45.12	N/A	41.93

<sup>1</sup> The increase in the 2015 rate riders effective July 1, 2015 was implemented by the OEB effective October 1, 2015. As such, in addition to the 2015 rate riders shown in the table, the OEB authorized interim period rate riders for the period from October 1, 2015 to December 31, 2016 to allow for the recovery of the increase in the riders for the period from July 1, 2015 to September 30, 2015. The revenue from the new riders for the July 1, 2015 to September 30, 2015 period was accrued in 2015. The nuclear interim rate rider is \$2.17 per megawatt hour (MWh) and the regulated hydroelectric interim rate rider is \$0.64/MWh.

The base regulated prices effective November 1, 2014 were established by the OEB's November 2014 decision and December 2014 order on OPG's 2013 application for new regulated prices. Effective November 1, 2014, the OEB also established regulated prices for the 48 hydroelectric facilities that were prescribed for rate regulation effective in 2014. Prior to November 1, 2014, the generation revenue for these 48 hydroelectric facilities was based on the Ontario electricity spot market price. The base regulated prices are expected to remain in effect until superseded by a subsequent order of the OEB.

The above base regulated prices were established using a forecast cost-of-service methodology based on the OEBapproved revenue requirements, taking into account the OEB-approved forecasts of production and operating costs for the regulated facilities and a return on rate base. Rate base for OPG represents the average net level of investment in regulated fixed and intangible assets in service and an allowance for working capital. In accordance with *Ontario Regulation 53/05* under the *Ontario Energy Board Act, 1998*, OPG's nuclear regulated prices are reduced by the amount of OPG's revenues, net of costs, from leasing the Bruce nuclear generating stations to Bruce Power.

Rate riders for OPG are established to recover or repay approved balances in OEB-authorized regulatory variance and deferral accounts. The 2015 rate riders included the riders established by the OEB's December 2014 order, as well as the riders authorized by the OEB's October 2015 order on OPG's 2014 application to recover the December 31, 2014 variance and deferral account balances. The rate riders established by the December 2014 order 2014 order were in effect from January 1, 2015 to December 31, 2015. The rate riders authorized by the October 2015 order are in effect from July 1, 2015 to December 31, 2016. The OEB's October 2015 order and related decisions are further discussed under the heading, *Recent Developments*.

#### **Unregulated Generation**

Electricity generated from most of OPG's unregulated assets is subject to Energy Supply Agreements (ESAs) with the Independent Electricity System Operator (IESO). Effective January 1, 2015, the Ontario Power Authority (OPA) merged with the IESO. The new entity continued under the name Independent Electricity System Operator. As such, the IESO was substituted as the counterparty of ESAs and other agreements that were previously executed with the OPA.

During 2015, ESAs were in effect for the following thermal generating facilities:

- Lennox GS: Capacity provided by, and production from, the station are subject to an ESA for the period from January 1, 2013 to September 30, 2022
- Atikokan GS: Capacity provided by, and production from, the station are subject to a 10-year ESA expiring in July 2024
- Thunder Bay GS: Capacity provided by, and production from, the station are subject to a 5-year ESA expiring in January 2020.

In addition, long-term hydroelectric ESAs are in place for the following facilities:

- Lac Seul and Ear Falls generating stations
- Healey Falls GS
- Sandy Falls, Wawaitin, Lower Sturgeon, and Hound Chute generating stations
- Little Long, Harmon, Smoky Falls, and Kipling generating stations (collectively the Lower Mattagami River generating stations)
- Peter Sutherland Sr. GS which is under construction. Payments under this ESA will commence when the station achieves commercial operation. Further details on the Peter Sutherland Sr. GS project are found under the heading, *Project Excellence*.

#### HIGHLIGHTS

#### **Overview of Results**

This section provides an overview of OPG's operating results for 2015 and 2014.

(millions of dollars – except where noted)	2015	2014
Revenue	5,476	4,963
Fuel expense	687	641
Gross margin	4,789	4,322
Operations, maintenance and administration	2,783	2,615
Depreciation and amortization	1,100	754
Accretion on fixed asset removal and nuclear waste management liabilities	895	797
Earnings on nuclear fixed asset removal and nuclear waste management funds	(704)	(714)
Regulatory disallowance related to the Niagara Tunnel project	-	77
Income from investments subject to significant influence	(39)	(41)
Property taxes	45	32
Restructuring	6	18
	4,086	3,538
Income before other loss (income), interest, income taxes, and extraordinary item	703	784
Other loss (income)	14	(3)
Income before interest, income taxes, and extraordinary item	689	787
Net interest expense	180	80
	100	
Income before income taxes and extraordinary item	509	707
Income tax expense	92	139
Income before extraordinary item	417	568
Extraordinary item		243
		210
Net income	417	811
Net income attributable to the Shareholder	402	804
Net income attributable to non-controlling interest <sup>1</sup>	15	7
Electricity production (TWh) <sup>2</sup>	78.0	82.2
Cash flow		
Cash flow provided by operating activities	1,465	1,433

<sup>1</sup> Relates to the 25 percent interest of the Amisk-oo-Skow Finance Corporation, a corporation wholly owned by the Moose Cree First Nation, in the Lower Mattagami Limited Partnership.

<sup>2</sup> Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

Net income attributable to the Shareholder was \$402 million for 2015, a decrease of \$402 million compared to 2014.

Income before interest, income taxes, and extraordinary item was \$689 million for 2015, a decrease of \$98 million compared to 2014. The following summarizes the significant factors which contributed to the variance:

Significant factors that reduced income before interest, income taxes, and extraordinary item:

- Fewer expenses deferred in regulatory accounts in 2015 resulting in higher depreciation, accretion, nuclear fuel, and operations, maintenance and administration (OM&A) expenses in 2015 of \$258 million. The higher deferrals in 2014 were primarily due to costs not included in the regulated prices in effect prior to November 1, 2014
- Lower nuclear gross margin of approximately \$190 million in 2015 as a result of a 3.6 terawatt hour (TWh) decrease in nuclear generation compared to 2014, primarily due to the four-unit Darlington Vacuum Building Outage (VBO)
- Increase in nuclear OM&A expenses, in addition to the impact of regulatory deferrals, of \$169 million
  primarily due to the execution of the Darlington VBO in 2015 and other outage activities in 2015, partly offset
  by savings in salary costs resulting from lower staff numbers
- Decrease in earnings from the Services, Trading, and Other Non-Generation segment of \$70 million, primarily due to higher trading margins during the first quarter of 2014 as a result of the unseasonably cold winter
- In addition to the impact of regulatory deferrals on accretion expense, decrease in earnings from the Regulated – Nuclear Waste Management segment of \$51 million primarily due to higher accretion expense due to the increase in the nuclear fixed asset removal and nuclear waste management liabilities (Nuclear Liabilities).

Significant factors that increased income before interest, income taxes, and extraordinary item:

- Increase in revenue of approximately \$290 million in the Regulated Nuclear Generation segment and \$85 million in the Regulated – Hydroelectric segment as a result of higher average sales prices due to new base regulated prices authorized by the OEB effective November 1, 2014 for all of OPG's regulated facilities, including the 48 hydroelectric stations prescribed for rate regulation effective in 2014
- Higher earnings of \$153 million from the Contracted Generation Portfolio segment primarily due to the new units of the Lower Mattagami River hydroelectric generating stations that were placed in service throughout 2014, and the conversion to biomass fuels of units at the Atikokan GS and the Thunder Bay GS
- Increase in earnings in the Regulated Hydroelectric segment in 2015 due to the write-off of \$77 million recorded in 2014 as a result of a regulatory disallowance by the OEB related to the Niagara Tunnel project.

Net interest expense increased by \$100 million in 2015, compared to 2014, primarily due to the cessation of interest capitalization for the Lower Mattagami River project, and costs that are no longer being deferred in 2015 in the Capacity Refurbishment Variance Account in respect of the Niagara Tunnel project. Interest costs were being deferred in respect of the Niagara Tunnel project in 2014 because they were not reflected in the regulated prices in effect prior to November 1, 2014.

Income tax expense decreased by \$47 million in 2015, compared to 2014, largely as a result of the change in reserves from the resolution of uncertainties, and lower income before income taxes.

In the third quarter of 2014, OPG recognized an increase in regulatory assets related to deferred income taxes expected to be recovered from customers through future regulated prices in respect of the 48 hydroelectric facilities prescribed for rate regulation effective in 2014, resulting in an extraordinary gain of \$243 million in the consolidated statements of income in 2014.

#### **Segment Results**

The following table summarizes OPG's income before interest, income taxes, and extraordinary item by business segment. Significant factors which contributed to the lower income during 2015, compared to 2014, are discussed above. A detailed discussion of OPG's performance by reportable segment is included in the section, *Discussion of Operating Results by Business Segment*.

(millions of dollars)	2015	2014
(Loss) income before interest, income taxes, and extraordinary item		
Regulated – Nuclear Generation	(2)	217
Regulated – Hydroelectric	650	502
Contracted Generation Portfolio	264	111
Total electricity generation business segments	912	830
Regulated – Nuclear Waste Management	(186)	(76)
Services, Trading, and Other Non-Generation	(37)	33
	689	787

#### **Electricity Generation**

Electricity generation for 2015 and 2014 was as follows:

<u>(</u> <i>TWh</i> )	2015	2014
Regulated – Nuclear Generation	44.5	48.1
Regulated – Hydroelectric		
Hydroelectric generating stations prescribed for rate regulation prior to 2014	19.4	19.2
Hydroelectric generating stations prescribed for rate regulation effective in 2014	11.0	12.1
Contracted Generation Portfolio <sup>1</sup>	3.1	2.8
Total OPG electricity generation	78.0	82.2
Total electricity generation by other generators in Ontario <sup>2</sup>	76.1	72.2

<sup>1</sup> Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

<sup>2</sup> Non-OPG generation is calculated as the Ontario electricity demand plus net exports, as published by the IESO, minus OPG electricity generation.

The decreased generation in 2015, compared to 2014, was primarily a result of:

- lower electricity generation from the Regulated Nuclear Generation segment mainly due to the VBO at the Darlington GS, which required the shutdown of all four units for the duration of the outage. The VBO started on September 14, 2015 and was completed safely on October 30, 2015. The decrease in generation was partially offset by higher generation at the Pickering GS primarily due to its improved operating performance compared to 2014, and
- lower generation from the hydroelectric generating stations prescribed for rate regulation effective in 2014 mainly due to lower water flows in eastern Ontario, partially offset by
- additional generation in the Contracted Generation Portfolio segment from the Lower Mattagami River hydroelectric generating stations, and
- an increase in generation from OPG's regulated hydroelectric generating stations prescribed for rate regulation prior to 2014 due to higher water flows on the Niagara River.

OPG's operating results are affected by changes in grid-supplied electricity demand resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in

distribution networks, and the impact of conservation efforts in the province. Ontario's electricity demand as reported by the IESO was 137.0 TWh in 2015, compared to 139.8 TWh in 2014.

Baseload generation supply surplus to Ontario demand continued to be prevalent in 2015. The surplus to the Ontario market is managed by the IESO, mainly through generation reductions at hydroelectric and nuclear stations and gridconnected renewable resources. Reducing hydroelectric production, which often results in spilling of water, is the first measure that the IESO uses to manage surplus baseload generation (SBG) conditions. During each of 2015 and 2014, OPG lost 3.2 TWh of hydroelectric generation due to SBG conditions. The gross margin impact of production forgone at OPG's regulated hydroelectric stations in 2015 and 2014 due to SBG conditions was offset by a regulatory variance account authorized by the OEB. For hydroelectric stations prescribed for rate regulation effective in 2014, the regulatory variance account became effective on November 1, 2014. For the remaining regulated hydroelectric stations, the variance account has been in effect since prior to 2014.

#### **Average Sales Prices**

The majority of OPG's generation is from the Regulated – Nuclear Generation and Regulated – Hydroelectric segments. The regulated prices authorized by the OEB for electricity generated from OPG's nuclear and regulated hydroelectric generating stations are discussed in the section, *Revenue Mechanisms for Regulated and Unregulated Generation*.

The average sales price for the Regulated – Nuclear Generation segment during 2015 was 6.5 cents per kilowatt hour (¢/kWh), compared to 5.6 ¢/kWh during 2014. The average sales price for the Regulated – Hydroelectric segment was 4.7 ¢/kWh, compared to 4.0 ¢/kWh during 2014. The increase in the average sales prices for the Regulated – Nuclear Generation and the Regulated – Hydroelectric segments was a result of the new base regulated prices effective November 1, 2014 and new rate riders effective in 2015. The average price for the Regulated – Hydroelectric segment in 2014 reflected the impact of spot market prices received prior to November 1, 2014 for the generation from the 48 hydroelectric stations prescribed for rate regulation effective in 2014.

#### **Cash Flow from Operations**

Cash flow provided by operating activities for 2015 was \$1,465 million, compared to \$1,433 million for 2014. The increase in cash flow provided by operating activities in 2015 compared to 2014 was primarily due to the higher base regulated prices authorized effective November 1, 2014 for all of OPG's regulated facilities and the rate riders authorized in October 2015, and higher revenues from the Contracted Generation Portfolio segment. The increase was partially offset by higher OM&A expenditures during 2015.

#### Funds from Operations Adjusted Interest Coverage

Funds from Operations (FFO) Adjusted Interest Coverage is an indicator of OPG's ability to meet interest obligations from operating cash flows. The FFO Adjusted Interest Coverage was 5.0 times for 2015 compared to 2.8 times for 2014. The FFO Adjusted Interest Coverage in 2015 increased primarily due to a higher FFO reflecting higher regulated prices for OPG's nuclear and regulated hydroelectric generation, and a lower adjusted interest expense resulting from an increase in the expected return on pension plan assets in 2015. The increase in the expected return was mainly due to a higher pension plan assets value at the end of 2014 compared to 2013, as a result of the strong performance of the pension plan assets during 2014.

#### **Return on Common Equity Excluding Accumulated Other Comprehensive Income**

Return on Common Equity Excluding Accumulated Other Comprehensive Income (ROE Excluding AOCI) is an indicator of OPG's performance consistent with its strategy to provide value to the Shareholder. ROE Excluding AOCI is measured over a 12-month period. ROE Excluding AOCI for 2015 was 4.0 percent, compared to 8.5 percent for 2014. ROE Excluding AOCI decreased for the year primarily due to lower net income attributable to the Shareholder, including the impact of the extraordinary gain of \$243 million recognized in 2014 related to the

48 hydroelectric stations prescribed for rate regulation effective in 2014. The Return on Common Equity Excluding Accumulated Other Comprehensive Income, excluding extraordinary gain, was 4.1 percent for 2015, compared to 6.0 percent for 2014.

OPG's ROE Excluding AOCI reflects the relatively higher equity component in its capital structure, compared to the deemed capital structure used by the OEB in determining OPG's regulated prices. The OEB establishes the allowed return on OPG's investment in regulated assets, which represent the majority of the Company's operations, using a prescribed rate of return and a deemed capital structure. In its November 2014 decision, the OEB applied a deemed capital structure of 45 percent equity and 55 percent debt. OPG's actual capital structure (excluding AOCI) contains approximately 65 percent equity. The higher equity component in OPG's actual capital structure, compared to the deemed capital structure applied by the OEB, results in a reduced actual ROE Excluding AOCI.

FFO Adjusted Interest Coverage and ROE Excluding AOCI are not measurements in accordance with US GAAP and should not be considered an alternative measure to net income, cash flows from operating activities, or any other performance measure under US GAAP. OPG believes that these non-GAAP financial measures are effective indicators of performance and are consistent with its corporate strategy to provide value to the Shareholder and to ensure availability of cost effective funds. The definition and calculation of FFO Adjusted Interest Coverage and ROE Excluding AOCI can be found under the heading, *Key Operating and Financial Performance Indicators* and *Supplementary Non-GAAP Financial Measures*, respectively.

#### **Recent Developments**

#### **Darlington Refurbishment**

On January 11, 2016, the Province announced that Ontario is moving forward with OPG's refurbishment of the fourunit Darlington GS at a total project budget of \$12.8 billion, with the refurbishment of the last unit scheduled to be completed by 2026. The Province's announcement followed the approval of the project budget and schedule by OPG's Board of Directors in November 2015. The budget of \$12.8 billion includes capitalized interest and escalation.

The Province has approved OPG to proceed with the execution of the refurbishment of the first of the four Darlington units, which is scheduled to commence in October 2016. OPG has begun the preparation for the first unit's refurbishment and, in January 2016, the Darlington Refurbishment project transitioned from the planning phase to the execution phase. OPG will be required to obtain the Province's approval prior to proceeding with each of the remaining unit refurbishments.

In January 2016, OPG awarded the Retube and Feeder Replacement (RFR) execution phase contract, which includes the removal and replacement of the fuel channel assemblies and the replacement of feeder pipes for each of the station's four reactors as part of unit refurbishments. The RFR is the largest sub-project of the Darlington Refurbishment project and represents a majority of the critical path schedule. The contract is valued at approximately \$2.75 billion for work to be executed on all four units and contains suspension and termination provisions. The RFR execution phase contract is the last major contract for the Darlington Refurbishment project that OPG expects to award as it moves forward with the first unit's refurbishment.

In December 2015, the Canadian Nuclear Safety Commission (CNSC) granted the Darlington GS a 10-year operating licence effective from January 1, 2016 to November 30, 2025. The term of the new licence spans most of the planned duration of the Darlington Refurbishment project.

The Darlington Refurbishment project is discussed further under the heading, *Project Excellence* in the *Core Business and Strategy* section. Further discussion of the operating licence renewal for the Darlington GS is found under the heading, *Operational Excellence* in the *Core Business and Strategy* section.

#### Pickering Extended Operations to 2024

On January 11, 2016, OPG announced that it plans to pursue continued safe and reliable operation of the Pickering GS beyond 2020. Under OPG's plan, all six operating units at the Pickering GS would operate until 2022, at which point two units would be shut down and the remaining four units would continue to operate until 2024. On January 11, 2016, the Province announced its approval of OPG's plan to pursue continued operation of the Pickering GS beyond 2020 up to 2024. Extending operations at the Pickering GS is expected to provide Ontario with a clean, reliable source of baseload electricity during the Darlington GS and initial Bruce nuclear unit refurbishments.

As part of the plan to extend Pickering operations, OPG is conducting component condition assessments to identify the work required to support the continued operation of the station to 2024. OPG is also continuing fuel channel life management work to confirm that the Pickering pressure tubes will achieve the additional life predicted by the technical work carried out to date.

OPG's current operating licence for the Pickering GS expires on August 31, 2018. By June 30, 2017, OPG is required to confirm to the CNSC the end date of commercial operations of all operating Pickering units.

As at December 31, 2015, the end-of-life date for the operating units at the Pickering GS, for accounting purposes, was to the end of 2020. The end of life accounting assumptions will be reassessed when OPG's further technical work confirms that the longer fuel channel life necessary to extend Pickering operations will be achieved.

#### Bruce Power Refurbishment and Bruce Lease Agreement

On December 3, 2015, the Province announced that Ontario will proceed with Bruce Power's refurbishment of the six unrefurbished units of the Bruce nuclear generating stations. The Province also announced that the refurbishment agreement between the IESO and Bruce Power had been correspondingly updated.

Effective December 31, 2015, OPG revised its accounting assumptions for the estimated useful lives of the Bruce A GS and Bruce B GS by extending them to reflect the estimated unit end-of-life dates reflected in the updated refurbishment agreement between the IESO and Bruce Power. Under the terms of the existing lease agreement between Bruce Power and OPG (Bruce Lease) and as required by the CNSC, OPG is primarily responsible for the Nuclear Liabilities associated with the Bruce nuclear generating stations. As such, effective December 31, 2015, OPG recognized an increase in the Nuclear Liabilities and related asset retirement costs capitalized to property, plant, and equipment to reflect changes in the useful lives for the Bruce nuclear generating stations. These changes do not impact OPG's net income for 2015. These changes are also not expected to materially affect OPG's income in 2016, as the existing Bruce Lease Net Revenues Variance Account and a new deferral account proposed by OPG in its December 2015 application to the OEB are expected to largely offset the changes in expenses arising from the changes in the estimated useful lives of OPG's nuclear stations and OPG's application for a new deferral account are further discussed under the heading, *Changes in Accounting Policies and Estimates*.

In connection with the Province's endorsement of Bruce Power's refurbishment plans, the Bruce Lease and related agreements were amended in December 2015 to extend Bruce Power's future options to renew the lease up to the end of 2064. To achieve better alignment with OPG's costs, the agreements were also amended to revise, starting in 2016, the approach for calculating nuclear waste management fees and supplemental rent payments payable to OPG for all Bruce units in addition to base rent, and to modify the fee structure for OPG's heavy water detritiation services starting in 2016. Amendments were also made to enable adjustments to future base rent and other fees for potential future changes in OPG's decommissioning and nuclear waste management cost estimates related to the Bruce facilities, and to remove a conditional supplemental rent rebate provision effective December 4, 2015. The impact of the removal of the supplemental rent rebate provision on the consolidated financial statements is discussed under the heading, *Balance Sheet Highlights*. The changes in revenues in 2016 resulting from the above amendments are expected to be offset by the impact of the Bruce Lease Net Revenues Variance Account.

#### Amendments to Ontario Regulation 53/05

In November 2015, the Province amended *Ontario Regulation 53/05* to establish a deferral account, effective January 1, 2017, that will record, for future recovery, a portion of the annual OEB-approved revenue requirement for OPG's nuclear facilities, with a view of making more stable year-over-year changes in OPG's nuclear regulated prices for the period from January 1, 2017 to the end of the Darlington Refurbishment project. The amended regulation requires the OEB to determine the revenue requirement for OPG's nuclear facilities on a five-year basis for the 10-year period beginning on January 1, 2017. The portion of the approved revenue requirement deferred in the new account each year will also be determined by the OEB on a five-year basis during this 10-year period. The regulation stipulates that the deferral account will record interest at a long-term debt rate reflecting OPG's cost of long-term borrowing approved by the OEB, compounded annually, and that the OEB shall authorize recovery of the balance in the account on a straight line basis over a period not to exceed 10 years following the end of the Darlington Refurbishment project.

The regulation was also amended to require the OEB to accept the need for the Darlington Refurbishment project in light of Ontario's 2013 Long-Term Energy Plan (LTEP) and the related policy of the Province endorsing the need for nuclear refurbishment.

#### OEB Application to Recover Balances in Variance and Deferral Accounts

In December 2014, OPG filed an application with the OEB to recover approximately \$1.8 billion in December 31, 2014 balances in most of the Company's authorized variance and deferral accounts. A partial settlement agreement between OPG and intervenors providing for the recovery of approximately \$1.5 billion of the total amount sought by OPG (the Partial Settlement Agreement) was approved by the OEB in June 2015. In September 2015, the OEB issued its decision approving for recovery, without adjustments, the remaining balances of \$263 million requested in OPG's application, which were not covered by the Partial Settlement Agreement.

In October 2015, the OEB issued an order implementing its June 2015 and September 2015 decisions. The order established new rate riders for OPG's regulated generation effective July 1, 2015, authorizing OPG to recover \$933 million over the period from October 1, 2015 to December 31, 2016. The remaining approved balances will be subject to recovery after 2016. The additional revenue from the new riders in 2015 was largely offset by a corresponding increase in amortization expense related to regulatory balances. The rate riders in effect during 2015 are found under the section, *Revenue Mechanisms for Regulated and Unregulated Generation*.

A further discussion of OPG's variance and deferral account balances is included under the section, *Balance Sheet Highlights*.

#### OEB's Decision on OPG's December 2014 Motion

In January 2016, the OEB issued its decision on OPG's December 2014 motion asking the OEB to review and vary the parts of its November 2014 decision related to the disallowance of the Niagara Tunnel project expenditures, and the application of the 2013 regulatory tax loss to reduce the 2014/2015 revenue requirement. In its decision, the OEB reversed a portion of the original disallowance of the Niagara Tunnel project expenditures, and upheld the original tax loss decision.

The original disallowance of the Niagara Tunnel project expenditures resulted in a write-off of \$77 million that was charged to operations in 2014. The original tax loss decision resulted in a reduction of the 2014/2015 revenue requirement by approximately \$70 million. In the first quarter of 2016, OPG expects to record a gain of approximately \$21 million to recognize the expected future recovery from customers of the portion of the disallowance reversed by the OEB's motion decision. As OPG's financial results have previously reflected the effect of the OEB's original tax loss decision, the motion decision on the tax loss will not impact OPG's 2016 financial results.

#### Supreme Court of Canada's Decision on 2011 OEB Ruling

In its March 2011 decision on OPG's application for regulated prices effective March 1, 2011, the OEB disallowed recovery of \$145 million of OPG's forecast nuclear compensation costs for the 2011 to 2012 period. The majority of these costs were based on previously negotiated collective bargaining agreements. OPG appealed this decision to the Divisional Court of Ontario in 2011 and, through subsequent appeals, the matter was heard by the Supreme Court of Canada (Supreme Court) in December 2014. In September 2015, the Supreme Court issued its decision upholding the disallowance.

As OPG's financial results have previously reflected the effect of the OEB's disallowance, the decision by the Supreme Court did not impact OPG's 2015 results.

#### Shareholder Declaration and Resolution to Sell the Company's Head Office

In December 2015, OPG received a Shareholder Declaration and Resolution that requires the Company to sell its head office premises in Toronto, Ontario. The Shareholder Resolution also requires OPG to transfer to the Province the portion of the proceeds from the sale equal to the after-tax accounting gain on sale, net of transaction costs.

#### Renewal of Collective Agreements

As at December 31, 2015, the Power Workers' Union (PWU) represented approximately 5,300 OPG regular employees or 57 percent of OPG's regular workforce. The previous collective agreement between OPG and the PWU expired on March 31, 2015. In May 2015, the parties agreed to renew the collective agreement for a three-year term, expiring on March 31, 2018. The changes to the collective agreement included increases to employee pension plan contributions in each year of the agreement.

The Society of Energy Professionals (The Society) represented approximately 2,950 OPG employees or 32 percent of OPG's regular workforce as at December 31, 2015. The governing collective agreement between OPG and The Society expired on December 31, 2015. In November 2015, the parties agreed to renew the collective agreement for a three-year term, expiring on December 31, 2018. Changes to the collective agreement included increases to employee pension plan contributions in each of the first two years of the agreement.

The changes to both collective agreements provide existing employees with lump sum payments for each of the first two years of the respective contract and eligibility to annually receive shares in Hydro One Inc. (Hydro One) for up to 15 years starting in the third year of the contract, as long as these employees continue to make contributions to the OPG pension plan. The contract terms of both agreements were conditional on the initial public offering of Hydro One shares, which occurred in November 2015.

#### CORE BUSINESS AND STRATEGY

OPG delivers value to Ontario electricity customers and its Shareholder, the Province of Ontario, by reliably and costeffectively producing electricity from its diversified portfolio of clean energy generating assets while operating in a safe, transparent, environmentally responsible and commercially sound manner. OPG also seeks to pursue, on a commercial basis, generation development projects and other business growth opportunities to the benefit of the Shareholder. OPG's four key strategic imperatives are:

- Operational Excellence
- Project Excellence
- Financial Strength
- Social Licence.

#### **Operational Excellence**

Operational excellence at OPG is accomplished by the safe and environmentally responsible generation of reliable and cost-effective electricity from the Company's generating assets through a highly trained and engaged workforce.

#### Workplace Safety and Public Safety

Workplace safety and public safety are fundamental core values at OPG. OPG is committed to operating all of its facilities in a safe, secure, and reliable manner that minimizes risks to a reasonably achievable level. Safety is an overriding priority in all activities performed at OPG's generating and other facilities, and all employees and contractors are expected to conduct themselves in manner that ensures workplace safety and public safety in line with the Company's safety culture.

In the area of workplace safety, OPG is committed to achieving excellent safety performance through continuous improvement and a strong safety culture, with the ultimate goal of zero injuries. Workplace safety performance is measured using two primary indicators:

- All Injury Rate (AIR)
- Accident Severity Rate (ASR).

Overall, OPG's workplace safety performance is consistently one of the best amongst its comparator Canadian electrical utilities. In November 2015, OPG was recognized by the Canadian Electricity Association (CEA) for the third consecutive year for achieving top quartile performance amongst comparable utilities with its 2014 AIR and ASR results.

OPG's AIR and ASR results were as follows:

	2015	2014
AIR (injuries per 200,000 hours worked)	0.39	0.36
ASR (days lost per 200,000 hours)	0.50	1.31

OPG remains steadfast in its commitment to workplace safety excellence and continuous improvement in safety management systems. In 2015, OPG continued to focus on strengthening its integrated health and safety management system and operational risk control procedures across the company. These controls ensure continued enterprise-wide monitoring of health and safety performance and support continuous learning and improvement in these areas.

Contractors are required to conduct work safely at OPG sites. In support of this requirement, OPG utilizes a contractor pre-qualification process, applies contractor safety governance, and provides on-site safety support for many of OPG's major projects. In 2015, OPG reviewed contractors' health and safety programs and implemented additional oversight and field monitoring to ensure ongoing compliance. In the past seven years, OPG has consistently shown a better than average Construction Contractor AIR as compared to the Health and Safety Association Contractor AIR, which is a metric of construction contractor safety performance across Ontario.

To ensure continued public safety, radiation exposure to members of the public resulting from the operation of OPG's nuclear generating stations is estimated on an annual basis for those individuals who live or work near the stations. The annual dose to the public resulting from operations of each nuclear facility is expressed in microsieverts ( $\mu$ Sv), which is an international unit of radiation dose measurement. For 2014, the annual public doses resulting from the Darlington GS operations and the Pickering GS operations were 0.6  $\mu$ Sv and 1.2  $\mu$ Sv, respectively, which is approximately 0.1 percent of the annual legal limit of 1,000  $\mu$ Sv. While the public doses from OPG's nuclear operations for the 2015 operating year will not be finalized until the second quarter of 2016, they are not expected to differ significantly from the 2014 levels.

OPG is committed to high standards of public safety on waterways around hydroelectric dams and generating stations. A Dam Safety Review Panel, comprised of internationally recognized experts, has previously concluded that OPG's dam and public safety program is comparable with international best practices in a number of areas related to maintaining safe dam operations. OPG continues to develop a new risk-informed approach on behalf of the Ontario Ministry of Natural Resources and Forestry (MNRF) to prioritize and manage risks identified through dam safety assessments. In 2015, OPG continued its water safety campaign with a series of public service announcements illustrating the danger of water near hydroelectric dams and generating stations.

#### Electricity Generation Production and Reliability

Key strategic initiatives in support of operational excellence, specific to each of OPG's core generating operations, are discussed below. Generation and reliability performance for 2015 is discussed by operating segment in the section, *Discussion of Operating Results by Business Segment*.

#### Nuclear Operations

OPG is pursuing a number of strategic initiatives aimed at the continued safe and reliable operation of the Pickering GS and targeting top performance at the Darlington GS.

OPG's nuclear operations are regularly benchmarked against top performing nuclear facilities around the world. This allows OPG to identify, develop, and implement initiatives to further improve performance. During 2015, OPG participated in two World Association of Nuclear Operators (WANO) peer evaluations to compare against standards of excellence through an in-depth and objective review by an international panel of industry experts. In June 2015, OPG hosted a WANO peer evaluation for the Pickering GS, which focused on the safe and reliable operation of the station. The review confirmed that the Pickering GS continues to operate at high levels of safety. In November 2015, OPG hosted a corporate WANO peer evaluation for OPG's support functions, which focused on how these functions support the nuclear stations in their day-to-day operations. The results from this review identified areas of strength and areas for improvement.

OPG is continuing work on fuel channel life management with a view to increasing confidence for continued operation of the Pickering GS. OPG has completed the necessary work to demonstrate with sufficient confidence that the Pickering fuel channel life will allow all six operating units of the station to operate to the end of 2020. OPG's early technical work to date also shows that the Pickering GS can be operated safely beyond 2020. As such, OPG and the Province announced in January 2016 that OPG plans to pursue continued safe and reliable operation of the station to 2024. Under OPG's plan, all six operating units would operate to 2022, at which point two units would be shut down and the remaining four units would continue to operate to 2024. OPG is conducting component condition assessments to identify the work required to support the extended operation of the station to 2024 and is continuing fuel channel life management work to confirm that the station's pressure tubes will achieve the additional life predicted by the technical work undertaken to date.

OPG's current operating licence for the Pickering GS expires on August 31, 2018. By June 30, 2017, OPG is required to confirm to the CNSC the end date of commercial operations of all operating Pickering units. OPG has started work on the Pickering licence renewal application for the CNSC's approval in 2018.

OPG strives to operate and maintain its nuclear facilities to optimize equipment, performance, availability, and electricity generation, while improving the reliability and predictability of the fleet. Improved equipment reliability generally results in fewer generation interruptions. OPG continues to make investments in the performance of the Pickering GS, with a focus on improving plant reliability through implementing equipment modifications and fuel handling reliability improvements, reducing equipment maintenance backlogs, and completing critical and high priority work. This has resulted in Pickering GS achieving the best ever reliability in the history of the station during 2015.

Darlington's generation performance for 2015 was below plan, primarily as a result of outages required to mitigate equipment performance challenges, including those related to heat transport pump motors and turbine auxiliaries.

Improvement plans to address life cycle issues associated with this equipment continue to be developed as part of the station's equipment reliability strategy and are in the process of being implemented. This includes procuring additional spare primary heat transport pump motors and accelerating the replacement and refurbishment of the existing motors.

Nuclear inspection and testing programs are largely driven by maintenance and regulatory requirements, and are designed to ensure that equipment is performing reliably and safely. Execution of this and other outage work continues to be a high priority. As part of its commitment to operational excellence, OPG continues to focus on improving the planning, execution, monitoring, and reporting of outage work. A station-wide VBO at the Darlington GS requiring the shutdown of all four units for the duration of the outage was carried out in 2015. The VBO included inspection and testing of common safety systems to ensure continued availability for the next 12 years. Station containment and vacuum building structure testing was also performed during the outage with favourable results. The outage commenced on September 14, 2015 and was completed safely on October 30, 2015, within budget and in line with the return-to-service date committed to the IESO. This was the last VBO prior to the execution of the Darlington Refurbishment project and, therefore, the successful execution of the VBO was a critical step in support of the project's success.

Work is in progress to ensure the integration of life cycle management and refurbishment programs at the Darlington GS. This includes developing staffing strategies to support both ongoing station operations and the refurbishment project, planning and incorporating pre-requisite work for the refurbishment into the station's work schedule, and identifying life cycle and aging management work to sustain safe and reliable station operations for the next three decades.

In December 2013, OPG submitted an application to the CNSC for the licence renewal for the Darlington GS spanning the planned duration of the Darlington Refurbishment project. The existing licence for the station expired on December 31, 2015. In December 2015, Darlington GS received a ten-year operating licence, which is the longest licence ever granted by the CNSC to a Canadian nuclear power plant. The new licence, which is effective from January 1, 2016 to November 30, 2025, will allow OPG to execute the refurbishment of the four Darlington units. The licence term reflects the strong performance of the Darlington station and the preparations OPG has made for the refurbishment of the station as part of its commitment to operational and project excellence.

Delivering solutions that provide the best combination of safety, cost, and effectiveness, as well as establishing challenging financial targets based on comprehensive benchmarking continues to be a vital part of OPG's strategy to improve performance of the nuclear business unit. Financial and staffing targets continue to be reviewed and adjusted where necessary to reduce operating costs, while ensuring safety is not compromised.

#### Hydroelectric Operations

The objectives of OPG's hydroelectric operations include operating and maintaining the generating facilities in an efficient and cost-effective manner, and enhancing asset reliability and availability. OPG continues to evaluate and implement plans to increase capacity, maintain and improve performance, and extend the operating life of its hydroelectric generating assets.

OPG's plans for its existing hydroelectric generating stations are accomplished through multi-year capital investment and other programs, including replacements and upgrades of turbine runners, and refurbishment or replacement of existing generators, transformers, and controls. The aim of OPG's runner replacement and upgrade program is to increase hydroelectric station capacity by leveraging efficiency enhancements in runner design. Over the next three years, OPG plans to increase the total capacity of its hydroelectric generating fleet by approximately 35 MW. OPG is also planning to repair, rehabilitate, or replace a number of aging civil structures. Where economic and practical, OPG pursues opportunities to expand or redevelop its existing hydroelectric stations. As part of its commitment to operational excellence, OPG continues to make investments in its existing hydroelectric generating fleet. During 2015, OPG continued to execute a number of projects, including:

- completion of major equipment overhauls and rehabilitation work on Unit 1 of the Lower Notch GS, Unit 3 of the Des Joachims GS, the Manitou Falls GS, and the Otto Holden GS
- completion of the runner replacement and upgrade for Unit 2 of the Aguasabon GS
- continued work on the rehabilitation of Unit 5 of the Sir Adam Beck Pump GS, Unit 10 of the Sir Adam Beck 1 GS, Unit 2 of the Harmon GS, and concrete rehabilitation of the main dam at the Chats Falls GS.

During the first half of 2016, OPG will begin the execution of the capital project to refurbish the Sir Adam Beck Pump GS reservoir with a target completion date of April 2017. Project activities will include de-watering of the existing reservoir and performing reservoir floor repairs.

As part of OPG's ongoing strategy to reduce costs and increase efficiency, the operations of the Company's hydroelectric and thermal assets have been combined into one organization in regions where opportunities existed to more effectively utilize resources. This was successfully accomplished in both the Northwestern and Eastern Ontario regions. OPG will continue to evaluate potential opportunities for further regionalization of its hydroelectric and thermal fleet.

#### Thermal Operations

In April 2014, OPG ended coal-fired generation at the Thunder Bay GS, which marked the end of coal-fired generation in Ontario. Ontario is the first jurisdiction in North America to fully eliminate coal as a source of electricity generation.

OPG's thermal operations consist of biomass fuelled generating units at each of Atikokan GS and Thunder Bay GS, and an oil/gas fuelled generating station, the Lennox GS. OPG completed the conversion of one unit at the Thunder Bay GS to advanced biomass fuel and declared the unit in commercial operation in January 2015.

OPG's three thermal generating stations operate as peaking facilities, depending on electricity demand. This provides Ontario's electricity system with the flexibility to meet changing daily system demand and capacity requirements and enables the system to accommodate the expansion of Ontario's renewable generation portfolio. The continued operation of these stations during the initial years of the refurbishment of the Darlington GS and Bruce nuclear facilities is expected to provide Ontario with over 2,000 MW of peaking generation.

Thermal stations that are no longer available to generate electricity are included in the Services, Trading and Other Non-Generation segment once they are removed from service. This includes the Lambton GS and Nanticoke GS sites, which ceased coal-fired generation in 2013. OPG continues to preserve the option to convert the Lambton GS to natural gas in the future. There is currently no cost recovery mechanism in place for the costs incurred to preserve the site. The Company will revisit the decision to continue to incur preservation costs for the Lambton GS site in conjunction with Ontario's next LTEP. Continued preservation of the Lambton GS would provide Ontario with an option for approximately 900 MW of additional peaking capacity should repowering to natural gas be pursued. The costs incurred to preserve the station are charged to OM&A expenses.

In 2015, OPG announced that it would decommission the Nanticoke GS, as it could not commercially support further preservation costs without a corresponding recovery mechanism. OPG is currently developing a decommissioning plan for the Nanticoke GS, which will ensure that the station is closed safely, securely, and in an environmentally responsible manner. The costs of decommissioning the station are charged to a previously established decommissioning provision.

#### Environmental Performance

OPG's Environmental Policy states that "OPG shall meet all legal requirements and any environmental commitments that it makes, with the objective of exceeding these legal requirements where it makes business sense". This policy commits OPG to:

- establish and maintain an environmental management system (EMS)
- work to prevent or mitigate adverse effects on the environment with a long-term objective of continuous improvement
- manage its sites in a manner that strives to maintain, or enhance where it makes business sense, significant natural areas and associated species of concern.

In 2015, OPG maintained the ISO 14001 registration of its company-wide EMS. Within the EMS, OPG has planning, operational control, and monitoring programs to manage the Company's positive and negative impacts on the environment. Significant environmental aspects of OPG's operations include: spills, water emissions, water flow and level changes, radioactive emissions, radioactive wastes, habitat enhancement, and fish impingement and entrainment. Further details regarding OPG's environmental risks can be found under the section, *Risk Management*.

Environmental performance targets are set as part of the annual business planning process. OPG met or outperformed its 2015 targets for spills, environmental infractions, production of low and intermediate level radioactive waste, volume of non-processible radioactive waste shipped, and carbon-14 emissions to air. Performance for tritium emissions to air and water remained less than one percent of the regulatory limit. There were no significant environmental events during 2015.

There were no significant changes to environmental legislation applicable to OPG in 2015. In the second quarter of 2015, the Province announced its intention to implement a cap-and-trade system to regulate greenhouse gas (GHG) emissions. The implementing regulation is expected to be issued in 2016, with the program commencing in 2017. With OPG's low GHG emitting fleet, the program is not expected to have a material adverse economic impact on the Company. OPG continues to monitor federal and provincial developments in the area of climate change.

OPG communicates its environmental performance internally to employees and to external stakeholders, including the Ontario Ministry of the Environment and Climate Change, Environment Canada, the CNSC, and local communities. Details of OPG's environmental performance and initiatives to fulfill the Company's Environmental Policy can be found in OPG's 2014 Sustainable Development Report, available on the Company's website at <a href="http://www.opg.com">www.opg.com</a>.

#### Improving Efficiency and Reducing Costs

OPG remains focused on reducing costs by pursuing efficiency and productivity improvements across operating business units and support functions, while ensuring that there is no adverse impact on the safety, reliability and environmental sustainability of the Company's operations. This includes realignment of work, streamlining of processes and, where appropriate, continuing to leverage attrition to achieve human resource targets aligned with business requirements. Cost reduction initiatives are implemented at the enterprise and business unit level.

To drive efficiency and performance improvement, the Company continues to leverage a more scalable, centre-led organizational model that was implemented as part of a multi-year Business Transformation initiative. Through the Business Transformation initiative, OPG has reduced its regular headcount from ongoing operations by approximately 2,700 since the beginning of 2011, and embedded continuous improvement into organizational values and expected behaviours. The reductions in headcount to date have surpassed internal targets. Going forward, OPG is focusing on ensuring that the right human resources are in place to meet business objectives and build on efficiency gains achieved to date.

OPG's support functions, including human resources, information technology, finance, and business services, are focused on delivering cost effective services and managing risks in support of the Company's strategic imperatives. Since the launch of Business Transformation, OPG's support functions have achieved improved efficiency through process re-engineering, technology enhancements, governance streamlining, optimization of service delivery models, and other initiatives.

OPG's recent efforts to improve efficiency and reduce costs include the Enterprise Systems Consolidation Project (ESCP), a large-scale initiative to streamline the Company's software systems and improve business processes through the implementation of a common enterprise software platform. In early 2015, OPG successfully completed the implementation of the ESCP, which integrated enterprise systems that support plant operations, purchasing, payments, and time reporting in order to increase efficiencies.

In addition, in October 2015, following a competitive bid process, OPG awarded a five-year information technology services outsourcing contract to its incumbent provider, effective February 2016. The new contract is expected to generate ongoing cost savings for OPG.

As part of its commitment to operational excellence, OPG will continue to identify further opportunities to work more efficiently, reduce costs, and enhance organizational agility.

#### People and Culture

A well trained and engaged workforce is fundamental to the achievement of OPG's strategic imperatives. OPG continues to communicate and implement the values and behaviours expected from its employees in order to embed a strong corporate culture focused on safety, performance excellence, continuous improvement, and corporate citizenship.

The Company continues to focus on improving the capability of its workforce through leadership development, knowledge retention programs, and hiring in key areas. Securing the right talent mix will be supported through workforce planning and resourcing strategies, both to acquire external talent into the organization and to develop existing employees, in order to effectively meet the Company's immediate and longer term business needs. Resourcing strategies are being developed to the end of planned commercial operations of the Pickering GS through to the end of the station's planned post-operating stabilization period, during which the units are expected to be defueled and placed in a safe state condition. The goal of these strategies will be to ensure that the Company's workforce continues to have the right skill set and capability for the safe and effective operation of the generating facilities into the future.

As part of its strategy to develop and engage employees and to build leadership talent, the Company has an active succession planning program with a focus on accelerating development. OPG also has a talent management monitoring process to proactively assess staffing risks, challenges and opportunities. In 2015, OPG implemented a company-wide high potential leadership development program. This 18-month cross functional program is designed to identify and develop candidates for future leadership positions while they are still relatively early in their career. Approximately 120 employees are actively participating in the program with another 120 spaces planned for 2016.

Electricity generation involves complex technologies that require highly skilled and trained workers. Many positions at OPG have significant educational prerequisites and rigorous requirements for continuous training and periodic requalification. In addition to maintaining its internal training infrastructure, OPG relies on partnerships with government agencies, other electrical industry partners, and educational institutions to meet the required level of qualification. Training delivery models are evaluated for effectiveness and efficiency.

#### **Project Excellence**

OPG is pursuing a number of generation development and other projects in support of Ontario's electricity planning initiatives. OPG also continues to plan and execute maintenance and capital improvement projects related to its

existing assets. OPG's major projects include the refurbishment of the Darlington GS and the construction of the Peter Sutherland Sr. GS, a new hydroelectric generating station. Other projects include the Deep Geologic Repository (DGR) for the management of low and intermediate level waste (L&ILW). The status updates for OPG's major projects as of December 31, 2015 are outlined below.

Project		oital ditures	Approved budget	Planned in-service	
(millions of dollars)	Year-to-date	Life-to-date		date	
Darlington Refurbishment	706	2,166	12,800 <sup>1</sup>	2026 <sup>1</sup>	See update below.
DGR for L&ILW	7 <sup>2</sup>	186 <sup>2</sup>			See update below.
Peter Sutherland Sr. GS	83	95	300	First half of 2018	See update below.
Lower Mattagami River Project	115	2,484	2,600	June 2015	All six new units were placed in-service by December 2014 ahead of schedule and under budget. Project closure activities continued throughout 2015.

<sup>1</sup> The total project budget of \$12.8 billion is for the refurbishment of the four units at the Darlington GS, with the last unit scheduled to be completed by 2026.

<sup>2</sup> Project expenditures are funded by the nuclear fixed asset removal and nuclear waste management liabilities. Design activities on the project have been suspended pending receipt of the site preparation and construction licence.

OPG's aim is to be an industry leader in project management capability and performance. As part of its commitment to project excellence, OPG continues to enhance and streamline its approach to project planning and execution, with the goal of delivering all projects safely, on time, on budget, and with high quality. Achieving project excellence involves, among other things, putting in place qualified project management teams, performing detailed engineering, optimizing contracting strategies, engaging qualified and experienced vendors, and effectively monitoring and controlling performance.

#### Darlington Refurbishment

The Darlington generating units are currently forecast to be approaching their originally designed end-of-life. Refurbishment of the four generating units is expected to extend the operating life of the Darlington GS by approximately 30 years. The Darlington Refurbishment project is a multi-phase program comprising the following five major sub-projects:

- Retube and Feeder Replacement, which includes removal and replacement of fuel channel assemblies and feeder tubes in each reactor
- **Turbines and Generators**, which consists of inspections and repairs of turbine generator sets and the replacement of analog control systems with digital control systems
- **De-fueling and Fuel Handling**, which involves the de-fueling of the reactors and refurbishment of the fuel handling equipment
- Steam Generators, which includes mechanical cleaning, water lancing, and inspection and maintenance work on the generators
- Balance of Plant, which consists of work on smaller projects to replace or repair certain other station components.

On January 11, 2016, the Province announced that Ontario is moving forward with the four-unit refurbishment at the Darlington GS with the total project budget of \$12.8 billion. The total project budget of \$12.8 billion, which includes capitalized interest and escalation, was approved by OPG's Board of Directors in November 2015. The budget is consistent with the previous total project cost estimate of less than \$10 billion in 2013 dollars, excluding capitalized interest and escalation. The refurbishment of the last unit is scheduled to be completed by 2026.

In 2016, the Darlington Refurbishment project transitioned from the planning phase to the execution phase, as OPG began preparations for the refurbishment of the first unit, Unit 2, which is scheduled for October 2016.

In January 2016, OPG awarded the RFR execution phase contract. All major executed contracts for the Darlington Refurbishment project contain suspension and termination provisions.

The following is a summary of the 2015 activities and developments related to the project:

- In December 2015, OPG received a 10-year operating licence for the Darlington GS from the CNSC, which is effective from January 1, 2016 to November 30, 2025 and will span most of the refurbishment period
- As part of the Darlington operating licence renewal in December 2015, the CNSC approved the regulatory
  scope defined in the Integrated Implementation Plan (IIP). The IIP identifies activities that are required to be
  undertaken to meet updated codes, standards, and practices, and to ensure that the operation of the station
  continues to pose minimal risk to health, safety, security, and the environment
- An industrial contractor with significant field construction experience was engaged to assist in the active management and oversight of the project's field activities
- Testing of critical tools to be used in the RFR and De-fueling and Fuel Handling sub-projects, and detailed engineering design for the project were completed as planned
- A number of pre-requisite projects, including construction of facilities, infrastructure upgrades and installation of safety enhancements, are being completed in support of the execution phase of the project. A portion of these projects has been completed, with the remaining projects tracking to be completed in line with the execution plan for the first unit's refurbishment
- In November 2015, the Refurbishment Project Office (RPO) was completed. The facility will act as a secure entry point and provide supporting facilities for refurbishment personnel. The RPO is expected to streamline security access and other personnel logistics during the refurbishment period.

During 2016, milestones for the Darlington Refurbishment project include:

- Progression of pre-requisite work, including construction of the Re-tube Waste Processing Building
- Execution of pre-breaker open work to support the first unit's refurbishment and IIP commitments
- Project support activities including the establishment of the execution organization, development and review of work instructions, and conventional and radiation protection planning
- Procurement activities including the fabrication and delivery of reactor components for Unit 2
- Delivery of production tools for the RFR sub-project
- Removal of Unit 2 from service in October 2016
- Commencement of de-fueling of the Unit 2 reactor in support of the RFR activities.

#### Deep Geologic Repository for Low and Intermediate Level Waste

OPG has proposed a DGR for the long term management of the L&ILW produced from the continued operation of OPG-owned nuclear generating stations. Agreement has been previously reached with local municipalities for OPG to develop the DGR on lands adjacent to OPG's Western Waste Management Facility in Kincardine, Ontario.

In 2012, the CNSC and the Canadian Environmental Assessment Agency (CEAA) appointed a three-member Joint Review Panel (JRP) for OPG's proposed DGR for L&ILW. The JRP examined the environmental effects of the proposed DGR to meet the requirements of the *Canadian Environmental Assessment Act.* In May 2015, the JRP submitted its report and recommendations on the Environmental Assessment (EA) to the federal Minister of

Environment. The report concluded that, given mitigation, there is unlikely to be significant environmental impact from the project and recommended that the Minister approve the EA. The report further suggested that the project should be implemented expeditiously.

In June 2015, the CEAA announced that the public had until September 1, 2015 to provide comments on the potential environmental conditions relating to the JRP report. OPG responded to the CEAA's list of potential conditions in August 2015. In February 2016, the federal Minister requested additional information on certain aspects of the EA for the proposed L&ILW DGR, including information related to alternate locations for the project and the impact on environmental effects if the Nuclear Waste Management Organization's (NWMO) future used fuel repository were located in close proximity to the proposed L&ILW DGR. OPG is to inform the CEAA by April 18, 2016 when it anticipates to submit the requested information.

OPG has suspended design activities on the project pending receipt of the site preparation and construction licence from the JRP. Upon receipt of the licence, completion of the detailed design, development of a project schedule and a budget, consideration of consultation with the Saugeen Ojibway Nations community, and OPG Board of Directors' approval, OPG would proceed with construction. The in-service date of the DGR is expected to be approximately six to seven years from the start of construction.

#### Peter Sutherland Sr. GS (formerly the New Post Creek project)

In March 2015, OPG's Board of Directors approved a project to construct the Peter Sutherland Sr. GS, a new 28 MW hydroelectric station on the Abitibi River with a budget of \$300 million. The station will be constructed through PSS Generating Station LP, a partnership between OPG and Coral Rapids L.P., a wholly owned subsidiary of the Taykwa Tagamou Nation. Under the partnership agreement, Coral Rapids L.P. may acquire up to a 33 percent interest in the partnership. In May 2015, a hydroelectric ESA for the station was executed by the IESO and the partnership. The hydroelectric ESA formalized the long-term financial agreement with the IESO for the development of the station and the supply of electricity and related products to the Ontario market. Construction work commenced in the second quarter of 2015, with a planned in-service date in the first half of 2018. Project financing was completed in October 2015, as discussed under the heading, *Financing Activities* in the *Liquidity and Capital Resources* section.

Project milestones completed in 2015 include the construction of the main access road, establishment of the project camp, installation of temporary steel support walls, and the construction of spillway upstream and downstream cofferdams.

#### New Nuclear Units

The Government of Ontario's 2013 LTEP indicated that the Province would not proceed, at that time, with the construction of two new nuclear reactors at the Darlington site. The 2013 LTEP also indicated that the Ontario Ministry of Energy would work with OPG to maintain the site preparation licence granted by the CNSC in relation to the potential construction of two new nuclear reactors at the Darlington site. As such, OPG has been undertaking activities required to support the CNSC Power Reactor Site Preparation Licence and the Darlington New Nuclear Project EA.

In September 2015, the Federal Court of Appeal granted the appeal brought forward by OPG, the Attorney General of Canada, and the CNSC related to the May 2014 Federal Court (Canada) decision on the judicial review of the issuance of the CNSC Power Reactor Site Preparation Licence and the Darlington New Nuclear Project EA. The Federal Court of Appeal decision upheld the EA approval as well as the CNSC site preparation licence and awarded OPG its costs of the appeal.

On November 6, 2015, an application for leave to appeal was filed with the Supreme Court of Canada by the parties that brought forward the judicial review. OPG, the other respondents and the parties that brought the judicial review

filed their submissions in December 2015. The Supreme Court of Canada's decision on whether leave to appeal is granted is expected in the first half of 2016.

#### **Financial Strength**

As a commercial enterprise, OPG's financial priority is to achieve a consistent level of strong financial performance that delivers an appropriate level of return on the Shareholder's investment and positions the Company for future growth. Inherent in this priority are three objectives:

- Increase revenue, reduce costs and achieve appropriate return
- Ensure availability of cost effective funding for operational needs, generation development projects and long-term obligations
- Pursue opportunities to expand the existing core business and capitalize on new growth paths.

#### Increase Revenue, Reduce Costs and Achieve Appropriate Return

In line with its commercial mandate, OPG is focused on increasing revenue and achieving an appropriate rate of return on the Shareholder's investment, while taking into account the impact on Ontario electricity customers.

In order to achieve the objectives with respect to the regulated operations, OPG is focused on clearly demonstrating in its rate applications to the OEB that the costs required to operate and invest in the assets are reasonable and being prudently incurred, and should be fully recovered, and that the Shareholder's investment in these assets should earn an appropriate rate of return. OPG's current base regulated prices, which came into effect in November 2014, were lower than requested by OPG based on its forecast costs. This has negatively affected OPG's ability to earn the OEB-prescribed rate of return on its regulated assets.

To improve the financial strength of the regulated operations going forward, OPG is focused on preparing appropriate evidence in support of its OEB rate requests, aligning organizational resources to support future OEB applications, and continuing to identify opportunities for further efficiencies in the Company's cost structure. To date, OPG's focus on cost reduction and efficiency improvement initiatives has resulted in significant changes across the Company. This includes approximately \$920 million in cumulative savings realized to the end of 2015 from reducing ongoing operations headcount by approximately 2,700 regular employees since the beginning of 2011. OPG's cost reduction efforts and efficiency improvement initiatives are discussed further under the heading, *Operational Excellence*.

OPG's revenues from its regulated operations include recovery of amounts deferred in OEB-authorized regulatory variance and deferral accounts. In December 2014, OPG filed an application with the OEB to recover approximately \$1.8 billion in December 31, 2014 balances in most of the Company's authorized variance and deferral accounts. In 2015, through a partial settlement agreement with intervenors and the OEB decision on the aspects of the application not covered by the agreement, these balances were approved for recovery. In October 2015, the OEB issued an order authorizing OPG to recover \$933 million of the total approved amount through rate riders in effect from October 1, 2015 to December 31, 2016. Refer to the *Highlights* section for further details on the resolution of OPG's December 2014 deferral and variance account application.

In 2016, OPG plans to file a 5-year application with the OEB for new base regulated prices for production from its regulated hydroelectric and nuclear facilities, effective in 2017. The OEB has previously expressed an expectation that these prices would be determined on the basis of an incentive regulation ratemaking methodology for the hydroelectric operations, and a multi-year forecast cost of service ratemaking approach with incentive regulation features for the nuclear operations.

Consistent with the November 2015 amendment to *Ontario Regulation 53/05*, OPG plans to incorporate a nuclear rate smoothing proposal into its 2016 rate application, with a view of making more stable year-over-year changes in the nuclear base regulated prices during the Darlington Refurbishment period. Under rate smoothing, collection of a portion of the approved revenue requirement will be deferred into the future. According to *Ontario Regulation 53/05*,

the OEB must authorize recovery of the amounts deferred for future collection during the Darlington Refurbishment project over a period not to exceed 10 years from the end of the project.

OPG's planned rate application will seek to ensure that nuclear regulated prices under the rate smoothing approach provide sufficient cash flow to meet the Company's liquidity needs, support cost effective funding for the Darlington Refurbishment project and other expenditures, and maintain the Company's investment grade credit rating, while taking into account both near-term and future impacts on customers.

For generation development projects that do not form a part of the assets regulated by the OEB, OPG's strategy is to secure appropriate long-term revenue arrangements prior to proceeding with the project. In line with this strategy, most of OPG's unregulated operating facilities have negotiated ESAs. In June 2015, a hydroelectric ESA was executed with the IESO for the new 28 MW Peter Sutherland Sr. GS located on the Abitibi River.

OPG's capital structure currently reflects lower levels of debt than the deemed capital structure used by the OEB to set the Company's regulated prices. OPG is evaluating strategies to enhance Shareholder returns by optimizing its capital structure through better alignment with the deemed capital structure, taking into account the overall financial strength of the Company and the potential impact on the Company's investment grade credit rating.

#### Ensure Availability of Cost Effective Funding

OPG actively monitors its funding requirements and forecasts availability of funds to ensure that it can meet the Company's operational needs, project commitments and long-term obligations. OPG utilizes multiple sources of funds, including funds from operations, commercial paper, securitization of assets, letters of credit, credit facilities, long-term corporate debt, and private placement project financing. The Company's financing strategy leverages the strength of its balance sheet to obtain cost effective long-term corporate debt. OPG also accesses the capital markets for private placement project financing, secured by the assets of the project, where the characteristics of the project support such financing. Maintaining an investment grade credit rating is critical to OPG's ability to access cost effective financing.

In March 2015, DBRS Ltd. re-affirmed the long-term credit rating on OPG's debt at A (low), and the commercial paper rating at R-1 (low). All ratings from DBRS Ltd. have a stable outlook. On July 7, 2015, Standard & Poor's lowered OPG's long-term corporate credit rating from 'A-' to 'BBB+' with a stable outlook. Standard & Poor's rating action followed its July 6, 2015 downgrade to the Province of Ontario's rating from 'AA-' to 'A+'.

OPG intends to continue to access the capital markets, where appropriate, to obtain cost effective financing for future generation development projects. As OPG enters the execution phase of the Darlington Refurbishment project, it continues to evaluate options for cost effective financing. The refurbishment is currently being financed through general-purpose long-term corporate debt and funds generated from operations.

#### Pursue Business Growth Opportunities

OPG pursues commercially-based business growth opportunities through investments in its core generation portfolio, as well as emerging renewable energy project opportunities. OPG's growth strategy considers the Company's financial position and anticipated future changes in the generating fleet including the end of Pickering commercial operations. The growth strategy is also informed by industry, technological, environmental, social, and economic external factors. Growth opportunities are evaluated using financial and risk-based analyses as well as strategic considerations.

OPG's core business growth strategy focuses on the renewal and expansion of the Company's generation portfolio of nuclear, hydroelectric and thermal generating assets in Ontario, including the redevelopment and expansion of existing sites and potential new developments. The strategy leverages OPG's technical expertise as an experienced major generation developer and operator, combined with its existing diverse physical asset base. OPG assesses acquisition opportunities as they arise, taking into account operating synergies, strategic benefits, financial returns and risk profile.

OPG's current major generation development projects and asset life extension initiatives are discussed under the headings, *Operational Excellence* and *Project Excellence* in the *Core Business and Strategy* section.

OPG seeks to expand beyond its core generation business through emerging opportunities, including selective solar generation, energy storage and micro-grid development, and is considering longer-term growth paths that include broader electricity sector opportunities, within and outside Ontario. Growth opportunities may be pursued in partnership with other commercial entities where appropriate synergies exist and are aligned with OPG's business objectives.

In 2015, the Shareholder authorized OPG to participate in energy-related procurement processes in Ontario. In September 2015, OPG submitted bids for both ground mounted solar and hydroelectric projects under the IESO's Large Renewable Procurement (LRP) program, which is a competitive bidding process for procuring large renewable energy projects in Ontario. The bids for ground mounted solar projects were submitted in partnership with a solar project developer, SunEdison. Contracts under the LRP program are expected be awarded to successful bidders by the end of March 2016.

## **Social Licence**

As the largest, publicly-owned electricity generator in Ontario with diverse operations across the province, OPG holds itself accountable to the public and its employees, and continues to focus on maintaining public trust. OPG is committed to maintaining high standards of public safety and corporate citizenship, including environmental stewardship, transparency, community engagement, and First Nations and Métis relations. OPG's commitment to safety is discussed under the heading, *Workplace and Public Safety* in the *Core Business and Strategy* section.

OPG's operational and growth strategies support reductions in GHG emissions. In 2014, OPG stopped using coal to generate electricity. After safely ending coal-fired generation in the province, OPG has become Ontario's largest clean energy provider, producing and selling electricity that is over 99 percent free of GHG and smog-causing emissions. OPG has also implemented the use of biomass fuels at the Atikokan GS and Thunder Bay GS, which reduces GHG emissions. In June 2015, the CEA recognized OPG for the conversion of these units to biomass fuels with its 2015 Sustainable Electricity Award for Environmental Commitment.

As part of its commitment to environmental sustainability, OPG works with community partners to support regional ecosystems and biodiversity. In 2015, OPG continued efforts to protect and restore habitat, promote biodiversity education and awareness, and help the recovery of species that are at risk. In addition, OPG contributes to its site communities through the Company's Corporate Citizenship Program, which supports more than 900 charitable and non-profit initiatives annually in the areas of environment, education, and community partnership.

OPG is committed to being an open, transparent, and accountable company. With operations across Ontario, OPG works to maintain public trust with stakeholders by engaging site communities, sharing information, and being transparent about performance. In addition, OPG's operations are subject to extensive regulatory oversight, with public participation, by the CNSC, the OEB, and other entities.

OPG is focused on continuing to build long-term, mutually beneficial working relationships with First Nations and Métis communities. The Company seeks to establish these relationships based on a foundation of respect for the languages, customs, and political, social and cultural institutions of these communities. OPG's commitment in this area includes pursuing generation-related development partnerships with First Nations and Métis communities on the basis of long-term, mutually beneficial commercial arrangements. An example of this is the construction of the new Peter Sutherland Sr. GS in partnership with the Taykwa Tagamou Nation.

Further details regarding OPG's commitment to sustainable development, including information regarding the Company's environmental, social and economic performance and initiatives, are provided in OPG's 2014 Sustainable Development Report available on the Company's website at <u>www.opg.com</u>.

Filed: 2016-05-27 EB-2016-0152 Exhibit A2-1-1 Attachment 3 Page 32 of 173

## **BUSINESS SEGMENTS**

OPG has the following five reportable business segments:

- Regulated Nuclear Generation
- Regulated Nuclear Waste Management
- Regulated Hydroelectric
- Contracted Generation Portfolio
- Services, Trading, and Other Non-Generation.

# **Regulated – Nuclear Generation Segment**

The Regulated – Nuclear Generation business segment operates in Ontario, generating and selling electricity from the Pickering GS and the Darlington GS, both owned and operated by OPG. The business segment also includes revenue under the terms of a lease arrangement and related agreements with Bruce Power related to the Bruce nuclear generating stations. This revenue includes lease revenue, fees for nuclear waste management, and revenue from heavy water sales and detritiation services. The segment also earns revenue from isotope sales and ancillary services supplied by OPG-operated nuclear stations. Ancillary revenues are earned through voltage control and reactive support. Revenues under the agreements with Bruce Power and from isotope sales and ancillary services are included by the OEB in the determination of the regulated prices for production from OPG's nuclear facilities, which has had the effect of reducing these regulated prices.

## **Regulated – Nuclear Waste Management Segment**

OPG's Regulated – Nuclear Waste Management segment reports the results of the Company's operations associated with the management of nuclear used fuel and L&ILW, the decommissioning of OPG's nuclear generating stations including the stations on lease to Bruce Power, the management of the Used Fuel Segregated Fund (Used Fuel Fund) and the Decommissioning Segregated Fund (Decommissioning Fund) (together the Nuclear Funds) established pursuant to the Ontario Nuclear Funds Agreement (ONFA) with the Province, and related activities including the inspection and maintenance of the waste storage facilities. Accordingly, accretion expense, which is the increase in the carrying amount of the Nuclear Liabilities due to the passage of time, and earnings from the Nuclear Funds are reported under this segment.

As the nuclear generating stations operate over time, OPG incurs incremental costs related to used nuclear fuel and low and intermediate level wastes, which increase the Nuclear Liabilities. OPG charges these incremental costs to current operations in the Regulated – Nuclear Generation segment to reflect the cost of producing energy and earning revenue under the Bruce Power lease arrangement and related agreements. Since the incremental costs increase the Nuclear Liabilities in the Regulated – Nuclear Waste Management segment, OPG records an intersegment charge between the Regulated – Nuclear Generation and the Regulated – Nuclear Waste Management segments. The impact of the inter-segment charge is eliminated in OPG's consolidated statements of income and balance sheets.

The Regulated – Nuclear Waste Management segment is considered rate regulated because the costs associated with the Nuclear Liabilities are included by the OEB in the determination of regulated prices for production from OPG's Pickering and Darlington nuclear generating stations.

# **Regulated – Hydroelectric Segment**

OPG's Regulated – Hydroelectric business segment operates in Ontario, generating and selling electricity from most of the Company's hydroelectric generating stations. The business segment includes the results of the Sir Adam Beck 1, 2 and Pump generating stations, the DeCew Falls 1 and 2 generating stations, the R.H. Saunders GS, and the 48 hydroelectric stations prescribed for rate regulation effective in 2014.

In addition, the business segment includes ancillary revenues and other revenues from OPG's regulated hydroelectric stations. Ancillary revenues are earned through offering available generating capacity as operating reserve and through the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services. These ancillary revenues and other revenues are included by the OEB in the determination of the regulated prices for production from OPG's prescribed hydroelectric facilities, which has had the effect of reducing these regulated prices.

# **Contracted Generation Portfolio Segment**

The Contracted Generation Portfolio business segment operates in Ontario, generating and selling electricity from the Company's generating stations that are not prescribed for rate regulation. The segment primarily includes generating facilities that are under an ESA with the IESO or other long-term contracts. The results of the generating stations that are not currently subject to a contract or rate regulation, but are available to generate electricity for sale, if required, are included in this segment.

The Contracted Generation Portfolio segment also includes OPG's share of equity income from its 50 percent ownership interests in the PEC and Brighton Beach stations. Brighton Beach operates under an energy conversion agreement between Brighton Beach and Shell Energy North America (Canada) Inc. and the PEC station is operated under the terms of an Accelerated Clean Energy Supply contract with the IESO. OPG's share of the in-service generating capacity and generation volume from its interests in the PEC and Brighton Beach stations is also included in this segment.

The business segment also includes ancillary revenues and other revenues from the stations included in the segment, which are earned through offering available generating capacity as operating reserve, and the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services.

# Services, Trading, and Other Non-Generation Segment

The Services, Trading, and Other Non-Generation segment is a non-generation segment that is not subject to rate regulation. It includes the revenue and expenses related to OPG's trading and other non-hedging activities. As part of these activities, OPG transacts with counterparties in Ontario and neighbouring energy markets in predominantly short-term trading activities of typically one year or less in duration. These activities relate to electricity that is purchased and sold at the Ontario border, financial energy trades, financial risk management energy product revenues, and sales of energy-related products. In addition, OPG has a wholly owned trading subsidiary that transacts solely in the United States (US) market. The results of this subsidiary are reported in this segment. All contracts that are not designated as hedges are recorded as assets or liabilities at fair value on the consolidated balance sheets, with changes in fair value recorded in the revenue of this segment. In addition, the segment includes revenue from real estate rentals, other unregulated service revenues, and activities related to the Lambton GS and the Nanticoke GS that were shut down at the end of 2013.

# **KEY OPERATING AND FINANCIAL PERFORMANCE INDICATORS**

OPG evaluates the performance of its generating stations using a number of key indicators. Key operating performance indicators aligned with corporate strategic imperatives are measures of production efficiency and reliability, cost effectiveness, environmental performance, and safety performance. Certain of the measures used vary depending on the generating technology. The key financial performance indicators evaluate the Company's financial performance at the enterprise level.

## **Nuclear Unit Capability Factor**

OPG's nuclear stations are baseload facilities. They are not designed for fluctuating production levels to meet peaking demand. The nuclear Unit Capability Factor is a key measure of nuclear station performance. It measures the amount of energy that the unit(s) generated over a period of time, adjusted for externally imposed constraints, such as transmission or demand limitations, as a percentage of the amount of energy that would have been produced over the same period had the unit(s) produced maximum generation. Capability factors are primarily affected by planned and unplanned outages. Capability factors, by industry definition, exclude production losses beyond plant management's control, such as grid-related unavailability.

# **Nuclear Total Generating Cost per MWh**

Nuclear Total Generating Cost (TGC) per MWh is used to measure the cost performance of OPG's nuclear generating assets. Nuclear TGC per MWh is defined as OM&A expenses of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to OPG's nuclear electricity generation business), nuclear fuel expense for OPG-operated stations (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs) incurred in the year, divided by nuclear electricity generation. In 2015, the Nuclear TGC per MWh indicator was amended for greater comparability across periods including the adjustment to exclude the impact of regulatory variance and deferral accounts. The change was also reflected in the comparative period. Further detail is included in the section, *Supplementary Non-GAAP Financial Measures*.

## Hydroelectric Availability

OPG's hydroelectric stations operate as baseload, intermediate, or peaking stations. Hydroelectric Availability is a measure of the reliability of a hydroelectric generating unit. It is represented by the percentage of time the generating unit is capable of providing service, whether or not it is actually generating electricity, compared to the total time for the respective period.

# Hydroelectric OM&A Expense per MWh

Hydroelectric OM&A Expense per MWh is used to measure the cost-effectiveness of OPG's hydroelectric generating stations. It is defined as total hydroelectric OM&A expenses divided by the hydroelectric electricity generation, for the respective business segments.

In 2015, the Hydroelectric OM&A Expense per MWh indicator was simplified to remove adjustments to the total hydroelectric OM&A expenses used in measuring performance. The change was also reflected in the comparative period.

## **Thermal Equivalent Forced Outage Rate**

Equivalent Forced Outage Rate (EFOR) is an index of the reliability of a generating unit at OPG's thermal stations. It is measured by the ratio of time a generating unit is forced out of service by unplanned events, including any forced deratings, compared to the amount of time the generating unit was available to operate.

## Return on Common Equity Excluding Accumulated Other Comprehensive Income

ROE Excluding AOCI is an indicator of OPG's performance consistent with its objective to deliver value to the Shareholder. ROE Excluding AOCI is defined as net income attributable to the Shareholder for the period divided by average equity attributable to the Shareholder excluding AOCI for that period. ROE Excluding AOCI is measured over a 12-month period. Further details are found under the sections, *Highlights* and *Supplementary Non-GAAP Financial Measures*.

# **Funds from Operations Adjusted Interest Coverage**

The FFO Adjusted Interest Coverage ratio is an indicator of OPG's ability to meet interest obligations from operating cash flows and is consistent with the Company's objective of ensuring availability of cost effective funding. The FFO Adjusted Interest Coverage ratio is defined as FFO before interest divided by adjusted interest expense. The ratio is measured over a period of twelve months. More details are found under the sections, *Highlights* and *Supplementary Non-GAAP Financial Measures*.

Nuclear TGC per MWh, ROE Excluding AOCI, and the FFO Adjusted Interest Coverage ratio are not measurements in accordance with US GAAP. They should not be considered as alternative measures to net income or any other measure of performance under US GAAP. However, OPG believes that these non-GAAP financial measures are effective indicators of its performance and are consistent with the Company's strategic imperatives and related objectives.

## **Other Key Indicators**

In addition to production reliability, cost effectiveness, and financial performance indicators, OPG has identified certain environmental and safety performance measures. These measures are discussed under the section, *Core Business and Strategy*.

## DISCUSSION OF OPERATING RESULTS BY BUSINESS SEGMENT

(millions of dollars)	2015	2014
Revenue	3,245	3,015
Fuel expense	301	258
Gross margin	2,944	2,757
Operations, maintenance and administration	2,200	1,983
Depreciation and amortization	717	529
Property taxes	26	28
Income before other loss, interest, and income taxes	1	217
Other loss	3	-
(Loss) income before interest and income taxes	(2)	217

#### **Regulated – Nuclear Generation Segment**

Loss before interest and income taxes from the segment was \$2 million in 2015, compared to income before interest and income taxes of \$217 million in 2014. The decrease in earnings of \$219 million compared to 2014 was primarily a result of an increase in the number of outage days and outage activities during 2015, which reduced generation by 3.6 TWh and increased OM&A expenses. The planned Darlington VBO, which required the shutdown of all four units at the Darlington GS for 47 days, was the primary contributor to the decrease in generation and increase in OM&A expenses compared to 2014. Other outages at the Darlington GS during 2015 also reduced segment earnings.

Lower segment earnings in 2015, compared to 2014, also reflected additional depreciation expenses of \$111 million, additional OM&A expenses of \$48 million, and additional fuel expenses of \$52 million, due to higher amounts deferred in regulatory accounts in 2014. The higher deferrals in 2014 primarily related to costs that were not included in the regulated prices in effect prior to November 1, 2014. Higher average sales prices due to the higher base regulated price effective November 1, 2014 partially offset the decrease in segment earnings in 2015 by approximately \$290 million.

Generation revenue in 2015 reflected revenues from the new rate riders authorized by the OEB in October 2015 with an effective date of July 1, 2015. The resulting increase in revenue was largely offset by higher amortization expense

related to the regulatory balances. The impact of the new rate riders is discussed further under the section, *Balance Sheet Highlights*.

Segment revenue in 2014 and 2015 reflected changes in the fair value of the liability for the derivative embedded in the Bruce Lease, as well as offsetting changes in the regulatory asset for the Bruce Lease Net Revenue Variance Account. As a result of the December 2015 amendments to the Bruce Lease, the derivative liability was reversed in 2015, resulting in an increase in revenue of \$299 million, compared to 2014, and an offsetting decrease in revenue related to the decrease in the regulatory asset for the Bruce Lease Net Revenues Variance Account. As such, there was no impact on revenue or net income from the changes in the fair value of the derivative liability and its derecognition. Refer to the section, *Balance Sheet Highlights*, for further discussion of the derecognition of the embedded derivative. The amendments to the Bruce Lease are discussed under the heading, *Recent Developments* in the *Highlights* section.

The Unit Capability Factors for the Darlington GS and Pickering GS and the Nuclear TGC per MWh for 2015 and 2014 were as follows:

	2015	2014
Unit Capability Factor (%)		
Darlington GS	76.9	92.1
Pickering GS	79.4	75.3
Nuclear TGC per MWh <i>(\$/MWh)</i>	66.29	57.84

Due to the four-unit VBO and an increase in other outage days, the Unit Capability Factor at the Darlington GS decreased in 2015 compared to 2014.

The increase in the Unit Capability Factor at the Pickering GS in 2015 compared to 2014 was primarily due to improved reliability as the number of unplanned outage days decreased, partially offset by an increase in planned outage days. Improvements in reliability at the Pickering GS were primarily associated with improved equipment reliability and human performance.

The increase in the Nuclear TGC per MWh in 2015 compared to 2014 primarily reflected lower generation at Darlington GS, and higher expenses relating to the Darlington VBO and other outages.

The definition and calculation of Nuclear TGC per MWh are found under the headings, *Key Operating and Financial Performance Indicators* and *Supplementary Non-GAAP Financial Measures*, respectively. The definition of the Nuclear Unit Capability Factor is also found under the heading, *Key Operating and Financial Performance Indicators*.

# **Regulated – Nuclear Waste Management Segment**

	2015	2014
Revenue Operations, maintenance and administration Accretion on nuclear fixed asset removal and nuclear waste management liabilities Earnings on nuclear fixed asset removal and nuclear waste	122 132 880 (704)	121 129 782 (714)
management funds Loss before interest and income taxes	(186)	(76)

Loss before interest and income taxes was \$186 million for 2015, compared to \$76 million for 2014. The decrease in earnings was primarily due to higher accretion expense resulting from higher amounts deferred in regulatory accounts in 2014 for costs not included in the regulated prices in effect prior to November 2014. The higher accretion

expense in 2015 also reflected the increase in the Nuclear Liabilities, compared to 2014, due to the increase in the present value of the underlying obligation to reflect the passage of time.

The decrease in segment earnings was also partly attributable to lower earnings on the Used Fuel Fund. A lower Ontario Consumer Price Index (CPI) in 2015, compared to 2014, resulted in a lower year-over-year return on the portion of the Used Fuel Fund guaranteed by the Province. The Province guarantees OPG's annual return for the Used Fuel Fund at 3.25 percent plus the change in the Ontario CPI for funding related to the first 2.23 million used fuel bundles (committed return), as discussed under the heading, *Nuclear Fixed Asset Removal and Nuclear Waste Management Funds* in the *Critical Accounting Policies and Estimates* section.

# **Regulated – Hydroelectric Segment**

(millions of dollars)	2015	2014
Revenue <sup>1</sup>	1,619	1,417
Fuel expense	345	343
Gross margin	1,274	1,074
Operations, maintenance and administration	338	325
Depreciation and amortization	282	167
Regulatory disallowance related to the Niagara Tunnel project	-	77
Property taxes	1	1
Income before other loss, interest, income taxes, and extraordinary item	653	504
Other loss	3	2
Income before interest, income taxes, and extraordinary item	650	502

During 2015 and 2014, the Regulated – Hydroelectric segment revenue included incentive payments of \$26 million and \$16 million, respectively, related to the OEB-approved hydroelectric incentive mechanism. The mechanism provides a pricing incentive to OPG to shift hydroelectric production from lower market price periods to higher market price periods, reducing the overall costs to customers.

The increase in income before interest, income taxes, and extraordinary item of \$148 million during 2015, compared to 2014, was largely due to the write-off of \$77 million recorded in 2014 as a result of a regulatory disallowance by the OEB related to the Niagara Tunnel project, and higher regulated prices in 2015. The higher base regulated prices came into effect on November 1, 2014, increasing revenue in 2015 by approximately \$85 million compared to 2014.

The revenue impact of higher rate riders in 2015, compared to 2014, was largely offset by a corresponding increase in amortization expense related to regulatory balances.

The Hydroelectric Availability and Hydroelectric OM&A Expense per MWh for 2015 and 2014 were as follows for the stations included in the Regulated – Hydroelectric segment:

	2015	2014
Hydroelectric Availability (%)	91.2	91.4
Hydroelectric OM&A Expense per MWh (\$/MWh)	11.1	10.4

The Hydroelectric Availability during 2015 was comparable with the availability during 2014. The increase in the Hydroelectric OM&A Expense per MWh in 2015 compared to 2014 was primarily due to lower generation.

The definition of Hydroelectric Availability and Hydroelectric OM&A Expense per MWh is found under the heading, *Key Operating and Financial Performance Indicators*.

# **Contracted Generation Portfolio Segment**

(millions of dollars)	2015	2014
Devenue	505	220
Revenue	535	329
Fuel expense	39	37
Gross margin	496	292
Operations, maintenance and administration	183	175
Depreciation and amortization	72	38
Accretion on fixed asset removal liabilities	8	8
Property taxes	7	(1)
Income from investments subject to significant influence	(39)	(41)
Restructuring	-	8
Income before other loss (income), interest, and income taxes	265	105
Other loss (income)	1	(6)
	004	
Income before interest and income taxes	264	111

Income before interest and income taxes increased by \$153 million during 2015, compared to 2014. The increase primarily resulted from higher revenues from the stations of the Lower Mattagami River project, due to all new units being in service since the end of 2014. Also contributing to the higher income in 2015 was higher revenue from the Atikokan GS and Thunder Bay GS units, which have been converted from coal to biomass fuels.

The increase in income was partially offset by higher depreciation expense primarily due to the new assets placed in service as part of the Lower Mattagami River and biomass conversion projects. The increase in income was also partially offset by lower revenue from the Lennox GS, primarily as a result of higher average sales prices during the first half of 2014. In addition, OPG recognized restructuring expenses in 2014 relating to staffing changes at the Thunder Bay GS prior to its conversion from coal to advanced biomass.

Hydroelectric Availability, Hydroelectric OM&A Expense per MWh, and the Thermal EFOR for the stations included in the Contracted Generation Portfolio segment for 2015 and 2014 were as follows:

	2015	2014
Hydroelectric Availability <i>(%)</i> Hydroelectric OM&A Expense per MWh <i>(\$/MWh)</i>	88.6 24.0	90.2 23.8
Thermal EFOR (%)	11.2	8.9

Lower Hydroelectric Availability during 2015, compared to 2014, was primarily due to a higher number of planned outage days at the Kipling and Harmon generating stations on the Lower Mattagami River. The increase in Hydroelectric OM&A Expense per MWh during 2015, compared to 2014, was due to an increase in OM&A expenses related to the Lower Mattagami River stations. The higher Thermal EFOR in 2015, compared to 2014, was primarily due to an outage to perform repair work at the Lennox GS during the year. The extended duration of the outage reflected market conditions that made it more cost effective to carry out the repair work over a longer period.

The definition of Hydroelectric Availability, Hydroelectric OM&A Expense per MWh, and Thermal EFOR is found under the heading, *Key Operating and Financial Performance Indicators*.

## Services, Trading, and Other Non-Generation Segment

(millions of dollars)	2015	2014
Revenue	73	197
Fuel expense	2	3
Gross margin	71	194
Operations, maintenance and administration	48	119
Depreciation and amortization	29	20
Accretion on fixed asset removal liabilities	7	7
Property taxes	11	4
Restructuring	6	10
(Loss) income before other loss, interest, and income taxes	(30)	34
Other loss	7	1
(Loss) income before interest and income taxes	(37)	33

Income before interest and income taxes decreased by \$70 million during 2015 compared to 2014. The lower income was primarily due to lower trading margins for electricity sold to neighbouring energy markets, which was mainly a result of the unseasonably cold winter during the first quarter of 2014 that contributed to higher trading margins in 2014. The decrease in earnings was also due to the expiry of the cost recovery agreement for the Nanticoke GS and the Lambton GS at the end of 2014, and recoveries recognized during 2014 related to property tax reassessments. The impact on segment earnings of the expiry of the cost recovery agreement for the Nanticoke GS and the Lambton GS was largely offset by a reduction in OM&A expenses for these sites.

# LIQUIDITY AND CAPITAL RESOURCES

OPG's primary sources of liquidity and capital are funds generated from operations, bank financing, credit facilities provided by the Ontario Electricity Financial Corporation (OEFC), long-term corporate debt, and capital market financing. These sources are used for multiple purposes including: to invest in plants and technologies; to undertake major projects; to fund long-term obligations such as contributions to the pension fund and the Nuclear Funds; to make payments under the OPEB plans; and to service and repay long-term debt.

Changes in cash and cash equivalents for 2015 and 2014 are as follows:

(millions of dollars)	2015	2014
Cash and cash equivalents, beginning of period	610	562
Cash flow provided by operating activities Cash flow used in investing activities Cash flow (used in) provided by financing activities	1,465 (1,553) (58)	1,433 (1,545) 160
Net (decrease) increase	(146)	48
Cash and cash equivalents, end of period	464	610

For a discussion regarding cash flow provided by operating activities and the FFO Adjusted Interest Coverage ratio, refer to the details under the heading, *Overview of Results* under the section *Highlights*.

#### **Investing Activities**

Electricity generation is a capital-intensive business. It requires continued investment in plants and technologies to maintain and improve operating performance including asset reliability, safety and environmental performance, to

increase generating capacity of existing stations, and to invest in the development of new generating stations and other business growth opportunities.

Cash flow used in investing activities in 2015 was \$1,553 million, compared to \$1,545 million in 2014. The increase was primarily due to the investment of proceeds from the 2015 long-term debt issuance in support of the Peter Sutherland Sr. GS project into a structured deposit note, with staggered maturity dates until April 2017. The increase was also due to higher capital expenditures related to the Peter Sutherland Sr. GS, which commenced construction in the second quarter of 2015. The increase in cash flow used in investing activities was largely offset by lower expenditures for the Lower Mattagami River and Atikokan biomass conversion projects, which were placed in service in 2014.

OPG's forecast capital expenditures for 2016 are approximately \$2 billion. This includes amounts for the Darlington Refurbishment project, hydroelectric development projects including the construction of the Peter Sutherland Sr. GS, and sustaining capital investments across the generating fleet.

# **Financing Activities**

OPG maintains a \$1 billion revolving committed bank credit facility, which is divided into two \$500 million multi-year term tranches. In the second quarter of 2015, OPG renewed and extended both tranches to May 2020. As at December 31, 2015, there were no outstanding borrowings under the bank credit facility.

As at December 31, 2015, OPG maintained \$25 million of short-term, uncommitted overdraft facilities and \$456 million of short-term, uncommitted credit facilities, which support the issuance of the Letters of Credit. OPG uses Letters of Credit to support its supplementary pension plans and for other general corporate purposes. As at December 31, 2015, a total of \$384 million of Letters of Credit had been issued under these facilities. This included \$345 million for the supplementary pension plans, \$38 million for general corporate purposes, and \$1 million related to the operation of the PEC.

The Company has an agreement to sell an undivided co-ownership interest in its current and future accounts receivable to an independent trust. The maximum amount of co-ownership interest that can be sold under this agreement is \$150 million. The agreement expires on November 30, 2016. As at December 31, 2015 and December 31, 2014, there were Letters of Credit outstanding under this agreement of \$150 million, which were issued in support of OPG's supplementary pension plans.

As at December 31, 2015, the Lower Mattagami Energy Limited Partnership (LME) maintained a \$500 million bank credit facility to support the funding requirements for the Lower Mattagami River project including support for LME's commercial paper program. The facility originally consisted of two \$300 million multi-year tranches maturing in August 2019 and August 2015, respectively. In the third quarter of 2015, the maturity of the first tranche was extended to August 2020, while the second tranche was reduced to \$200 million and extended to August 2016. As at December 31, 2015, there was external commercial paper of \$225 million outstanding under LME's commercial paper program (2014 – nil). There were no amounts outstanding under LME's bank credit facility as at December 31, 2015.

OPG maintains a \$700 million credit facility with the OEFC in support of the Lower Mattagami River project. As at December 31, 2015, there were no outstanding borrowings under this credit facility. The credit facility expires in June 2016.

Since December 2014, OPG has maintained an \$800 million general corporate credit facility with the OEFC in support of its financing requirements for 2015 and 2016. As of December 31, 2015 and 2014, there were no outstanding borrowings under this credit facility. The credit facility expires on December 31, 2016.

In October 2015, PSS Generating Station LP, a subsidiary of OPG, issued long-term debt totaling \$245 million maturing in October 2067 to support the construction of the Peter Sutherland Sr. GS. The effective interest rate for

the debt was 4.9 percent and the coupon interest rate was 4.8 percent. The debt is secured by the assets of the project.

As at December 31, 2015, OPG's long-term debt outstanding was \$5,472 million, including \$273 million due within one year. OPG is evaluating its debt refinancing alternatives.

#### **Contractual and Commercial Commitments**

OPG's contractual obligations as at December 31, 2015, were as follows:

(millions of dollars)	2016	2017	2018	2019	2020	Thereafter	Total
Fuel supply agreements	175	173	163	97	65	110	783
Contributions under the ONFA <sup>1</sup>	150	163	193	288	133	2,285	3,212
Contributions to the OPG registered pension plan <sup>2</sup>	357	-	-	-	-	-	357
Long-term debt repayment	273	1,103	398	368	663	2,667	5,472
Interest on long-term debt	261	242	186	167	145	2,275	3,276
Short-term debt repayment	225	-	-	-	-	-	225
Commitments related to Darlington Refurbishment project <sup>3</sup>	284	-	-	-	-	-	284
Commitments related to Peter Sutherland Sr. GS	128	38	-	-	-	-	166
Operating licence	41	43	37	23	24	142	310
Operating lease obligations	16	17	17	14	14	47	125
Unconditional purchase obligations	68	61	58	57	55	5	304
Accounts payable and accrued charges	1,031	4	7	-	-	19	1,061
Other	89	39	29	26	2	69	254
Total	3,098	1,883	1,088	1,040	1,101	7,619	15,829

<sup>1</sup> Contributions under the ONFA are based on the 2012 ONFA Reference Plan contribution schedule approved in 2012. The updated ONFA Reference Plan is expected to be effective January 1, 2017.

<sup>2</sup> The pension contributions include ongoing funding requirements and additional funding requirements towards the deficit, in accordance with the actuarial valuation of the OPG registered pension plan as at January 1, 2014. The next actuarial valuation of the OPG registered pension plan must have an effective date no later than January 1, 2017. The pension contributions are affected by various factors including market performance, changes in actuarial assumptions, plan experience, changes in the pension regulatory environment, and the timing of funding valuations. Funding requirements after 2016 are excluded due to significant variability in the assumptions required to project the timing of future cash flows. The amount of OPG's additional, voluntary contribution, if any, is revisited from time to time.

<sup>3</sup> Estimated currently committed costs to close the project, including demobilization of project staff and cancellation of existing contracts and material orders.

# Other Commitments

#### Collective Agreements

As of December 31, 2015, OPG had approximately 9,250 full-time employees and approximately 1,250 seasonal, casual construction, contract, and non-regular staff. Most of OPG's full-time employees are represented by two unions:

The PWU – This union represents approximately 5,300 OPG employees or approximately 57 percent of OPG's regular workforce as at December 31, 2015. Union membership includes operators, technicians, skilled trades, clerical, and security personnel. The previous collective agreement between OPG and the PWU expired on March 31, 2015. In May 2015, the parties agreed to renew the collective agreement for a three-year term, expiring on March 31, 2018. Further details are discussed under the heading, *Recent Developments* in the *Highlights* section.

The Society – This union represents approximately 2,950 OPG employees or approximately 32 percent of OPG's regular workforce as at December 31, 2015. Union membership includes supervisors, professional engineers, scientists, and other professionals. The Company's governing collective agreement with the Society, which was established through an arbitration award, expired on December 31, 2015. In November 2015, the parties agreed to renew the collective agreement for a three-year term, expiring on December 31, 2018. Further details are discussed under the heading, *Recent Developments* in the *Highlights* section.

In addition to the regular workforce, construction work is performed through 19 craft unions with established bargaining rights on OPG facilities. These bargaining rights are established either through the Electrical Power Systems Construction Association (EPSCA) or directly with OPG. Collective agreements between the Company and its construction unions are negotiated either directly or through EPSCA. Thirteen of these collective agreements expired on April 30, 2015. Agreements of five-year terms have been completed with all trade unions.

# Information Technology Services Contract

OPG conducted a competitive bid process for outsourced information technology services over the 2014 and 2015 period, issuing a Request For Proposal to a number of qualified suppliers. In October 2015, following the competitive bid process, a five-year agreement was awarded to the incumbent effective February 2016. The estimated value of the new outsourcing contract is approximately \$300 million over the five-year period.

# **BALANCE SHEET HIGHLIGHTS**

The following section provides highlights of OPG's audited consolidated financial position using selected balance sheet data:

(millions of dollars)	2015	2014
Property, plant and equipment - net	20,595	17,593
The change was primarily due to the increase in asset retirement costs of \$2,330 million in 2015 related to the change in the estimate for the Nuclear Liabilities, which is discussed in the section <i>Changes in Accounting Policies and Estimates</i> , and capital expenditures on the Darlington Refurbishment and Peter Sutherland Sr. GS projects and sustaining capital programs. The increase was partially offset by depreciation expense during the year.		
Nuclear fixed asset removal and nuclear waste management funds (current and non-current portions)	15,136	14,379
The increase was primarily due to earnings on the Nuclear Funds and contributions to the Used Fuel Fund, partially offset by reimbursements of eligible expenditures on nuclear fixed asset removal and nuclear waste management activities.		
Regulatory assets (current and non-current portions)	5,907	7,191
The decrease was primarily due to the re-measurement of the pension and OPEB liabilities at the end of 2015, amortization of regulatory balances related to the rate riders in effect during 2015, and derecognition of the derivative embedded in the Bruce Lease, which is discussed under the heading, <i>Derecognition of the Derivative Embedded in the Bruce Lease</i> below.		
Long-term debt (including debt due within one year)	5,472	5,730
The decrease was a result of debt repayment of \$503 million in 2015, partially offset by debt issuance of \$245 million for the Peter Sutherland Sr. GS project in 2015.		
Fixed asset removal and nuclear waste management liabilities	20,169	17,028
The increase was primarily a result of the increase in the estimate for the nuclear asset retirement obligation of \$2,330 million in 2015, which is discussed in the section, <i>Changes in Accounting and Estimates,</i> and accretion expense during the year representing the increase in the liabilities due to the passage of time.		
Pension liabilities	2,597	3,570
Pension liabilities decreased primarily due to the earnings on the pension fund assets during 2015, re-measurement of the liabilities at the end of the year reflecting higher discount rates, and employer contributions to the pension fund during the year, partially offset by the current service and interest costs for the year.		
Long-term accounts payable and accrued charges		
The decrease is primarily due to the derecognition of the liability embedded in the Bruce Lease following the amendments to the Bruce Lease, as discussed under the heading, <i>Derecognition of the Derivative Embedded in the Bruce Lease</i> below.	207	529

## Impact of New Rate Riders for Recovery of OEB-authorized Variance and Deferral Account Balances

The OEB's decisions in June 2015 and September 2015 approved the recovery of OPG's December 31, 2014 deferral and variance balances of approximately \$1.8 billion. The approval included recovery of \$714 million recorded in the Pension and OPEB Cost Variance Account during 2013 and 2014 over six years starting on July 1, 2015, and \$225 million recorded in this variance account prior to 2013 that will continue to be recovered until December 31, 2024 as previously authorized by the OEB. The majority of the approved balances of \$809 million in the other accounts were approved for recovery over a period of 18 months starting on July 1, 2015.

As a result of the OEB's decisions and October 2015 order, OPG recorded \$301 million in amortization expense for regulatory balances in 2015 related to the period from July 1, 2015 to December 31, 2015, which was offset by corresponding revenue recognized during the period. As at December 31, 2015, net regulatory assets of \$602 million were classified as current on OPG's balance sheet to reflect the expected recovery of regulatory balances over the next 12 months based on the OEB's October 2015 order.

The OEB's 2015 decisions and order on OPG's application to recover the December 31, 2014 deferral and variance account balances are discussed under the heading, *Recent Developments* in the *Highlights* section.

#### Derecognition of the Derivative Embedded in the Bruce Lease

Effective December 4, 2015, the Bruce Lease was amended to remove a provision that provided for conditional reductions to OPG's revenue under the lease. Prior to the amendments, supplemental rent payments under the lease were reduced through a rent rebate for each calendar year where the arithmetic average of the hourly Ontario energy price fell below \$30/MWh and certain other conditions were met. This conditional reduction to revenue in the future was recognized as a derivative liability on OPG's consolidated balance sheets. The changes in the fair value of the derivative liability were recorded in the revenue of the Regulated – Nuclear Generation segment, with offsetting changes in the regulatory asset for the Bruce Lease Net Revenues Variance Account. Following the amendments to the Bruce Lease, OPG reversed the embedded derivative liability of \$299 million in December 2015, with an offsetting reduction in the regulatory asset for the Bruce Lease Net Revenues Variance Account. As such, the derecognition of the derivative did not affect net income in 2015. The conditional reduction in revenue remained in effect for the period from January 1, 2015 to December 3, 2015 on a pro-rated basis.

#### **Off-Balance Sheet Arrangements**

In the normal course of operations, OPG engages in a variety of transactions that, under US GAAP, are either not recorded in the Company's consolidated financial statements or are recorded in the Company's consolidated financial statements using amounts that differ from the full contract amounts. Principal off-balance sheet activities for OPG include guarantees and long-term contracts.

#### Guarantees

As part of normal business, OPG and certain of its subsidiaries and joint ventures enter into various agreements to provide financial or performance assurance to third parties. Such agreements include guarantees, standby Letters of Credit and surety bonds. For more details on OPG's guarantees, refer to Note 15 of OPG's audited consolidated financial statements.

Filed: 2016-05-27 EB-2016-0152 Exhibit A2-1-1 Attachment 3 Page 45 of 173

# **CRITICAL ACCOUNTING POLICIES AND ESTIMATES**

OPG's significant accounting policies, including the impact of major recent accounting pronouncements, are outlined in Note 3 of the audited consolidated financial statements. Certain of these policies are recognized as critical accounting policies by virtue of the subjective and complex judgments and estimates required around matters that are inherently uncertain and could result in materially different amounts being reported under different conditions or assumptions. The critical accounting policies and estimates that affect OPG's US GAAP consolidated financial statements are highlighted below.

# **Exemptive Relief for Reporting under US GAAP**

During 2014, OPG received exemptive relief from the OSC requirements of section 3.2 of National Instrument 52-107 *Acceptable Accounting Policies and Auditing Standards*. The exemption allows OPG to file consolidated financial statements based on US GAAP without becoming a US Securities and Exchange Commission registrant, or issuing public debt. The exemption will terminate on the earliest of the following:

- January 1, 2019
- the financial year that commences after OPG ceases to have activities subject to rate regulation
- the effective date prescribed by the International Accounting Standards Board for the mandatory application of a standard within International Financial Reporting Standards (IFRS) specific to entities with rateregulated activities.

As a result of OPG's 2011 decision to adopt US GAAP, as required by the FAA regulation, OPG's earlier plan to convert to IFRS, effective January 1, 2012, was discontinued. OPG had substantively completed its IFRS conversion project, which included separate diagnostic, development, and implementation phases, when it suspended the project. If a future transition to IFRS for the purposes of OPG's consolidated financial statements is required, conversion work can be effectively restarted with sufficient lead time to evaluate and conclude on changes that occurred subsequent to the decision to suspend the project.

# **Rate Regulated Accounting**

The Ontario Energy Board Act, 1998 and Ontario Regulation 53/05 provide that OPG receives regulated prices for electricity generated from the Sir Adam Beck 1, 2 and Pump generating stations, the DeCew Falls 1 and 2 generating stations, the R.H. Saunders GS, the 48 hydroelectric generating stations prescribed for rate regulation effective in 2014, and the Pickering and Darlington nuclear generating stations. OPG's regulated prices for these facilities are determined by the OEB.

The OEB is a self-funding Crown corporation. Its mandate and authority come from the *Ontario Energy Board Act*, *1998*, the *Electricity Act*, *1998*, and a number of other provincial statutes. The OEB is an independent, quasi-judicial tribunal that reports to the Legislature of the Province through the Minister of Energy. It regulates market participants in Ontario's natural gas and electricity industries. The OEB carries out its regulatory functions through public hearings and other more informal processes such as consultations.

US GAAP recognizes that rate regulation can create economic benefits and obligations that are required by the regulator to be obtained from, or settled with, the customers. When the Company assesses that there is sufficient assurance that incurred costs in respect of the regulated facilities will be recovered in the future, those costs are deferred and reported as a regulatory asset. When the Company is required to refund amounts to customers in the future in respect of the regulated facilities, including amounts related to costs that have not been incurred and for which the OEB has provided recovery through regulated prices, the Company records a regulatory liability.

Certain of the regulatory assets and liabilities recognized by the Company relate to variance and deferral accounts authorized by the OEB, including those authorized pursuant to *Ontario Regulation 53/05*. These accounts typically capture differences between actual costs and revenues and the corresponding forecast amounts approved by the

OEB in setting regulated prices, or record the impact of items not reflected in the approved regulated prices. The measurement of these regulatory assets and liabilities is subject to certain estimates and assumptions, including assumptions made in the interpretation of *Ontario Regulation 53/05* and the OEB's decisions. The estimates and assumptions made in the interpretation of the regulation and the OEB's decisions are reviewed as part of the OEB's regulatory process.

Regulatory assets and liabilities for variance and deferral account balances approved by the OEB for inclusion in regulated prices are amortized based on approved recovery or repayment periods. Disallowed balances are charged to operations in the period that the OEB's decision is issued.

In addition to regulatory assets and liabilities for variance and deferral accounts, OPG recognizes regulatory assets and liabilities for unamortized amounts recorded in AOCI in respect of pension and OPEB obligations, and deferred income taxes, in order to reflect the expected recovery or repayment of these amounts through future regulated prices charged to customers. There are measurement uncertainties related to these balances due to the assumptions made in the determination of pension and OPEB obligations and deferred income taxes that are attributed to the regulated facilities.

The regulatory asset for unamortized pension and OPEB amounts recorded in AOCI has reflected the OEB's use, since April 1, 2008, of the accrual basis of accounting for including pension and OPEB amounts in approved regulated prices for OPG. This is also the manner in which these costs are recognized in OPG's consolidated financial statements. Therefore, unamortized amounts in respect of OPG's pension and OPEB plans that are recognized in AOCI generally have not been reflected in the regulated prices until they are reclassified from AOCI and recognized as amortization components of the benefit costs for these plans.

In setting OPG's regulated prices effective November 1, 2014, the OEB limited amounts for pension and OPEB costs allowed in the approved revenue requirements to the regulated business portion of the Company's cash expenditures for its pension and OPEB plans. It is the Company's position that this decision by the OEB did not constitute a change in the basis of OPG's rate recovery of pension and OPEB costs. This position is based on the OEB's establishment of the Pension & OPEB Cash Versus Accrual Differential Deferral Account pursuant to its November 2014 decision, as discussed below, and the expectation expressed by the OEB in that decision that a transition from the accrual basis of recovery for OPG, if required, would be addressed in a future OPG rate proceeding, informed by the outcome of a future generic OEB proceeding related to the regulatory treatment and recovery of pension and OPEB costs. Accordingly, the Company continues to believe that there is sufficient likelihood that unamortized pension and OPEB amounts that have not yet been reclassified from AOCI will be included in future regulated prices or an OEB-authorized deferral or variance account as they are recognized in benefit costs. Therefore, the Company has continued to recognize a regulatory asset for these unamortized amounts.

Effective November 1, 2014, the Pension & OPEB Cash Versus Accrual Differential Deferral Account records the difference between OPG's actual pension and OPEB costs for the regulated business determined on an accrual basis under US GAAP and OPG's corresponding actual cash expenditures for these plans. The Company has recognized the amount set aside in the deferral account as a regulatory asset. As at December 31, 2015, the regulatory asset balance was \$315 million, which represents the excess of pension and OPEB costs calculated using the accrual basis over the cash basis for the period from November 1, 2014 to December 31, 2015. The OEB's November 2014 decision indicated that the future recovery, if any, of amounts recorded in the deferral account would be subject to the outcome of the generic OEB proceeding on the regulatory treatment and recovery of pension and OPEB costs.

In May 2015, the OEB began a consultation process to develop standard principles to guide its future review of pension and OPEB costs of rate regulated utilities in the electricity and natural gas sectors, including establishing appropriate regulatory mechanisms for cost recovery. OPG is participating in the consultation process, which is ongoing.

If, in a future proceeding, the OEB decides that the recovery basis for OPG's pension and OPEB amounts should be changed, OPG may be required to adjust the regulatory assets for unamortized pension and OPEB amounts recorded in AOCI and for the Pension & OPEB Cash Versus Accrual Differential Deferral Account.

See Notes 3, 5, 8, 9, and 11 of OPG's 2015 audited consolidated financial statements for additional disclosures related to the OEB's decisions, regulatory assets and liabilities, and rate regulated accounting.

## **Income Taxes and Investment Tax Credits**

OPG is exempt from income tax under the *Income Tax Act* (Canada). However, under the *Electricity Act, 1998*, OPG is required to make payments in lieu of corporate income taxes to the OEFC. These payments are calculated in accordance with the *Income Tax Act* (Canada) and the *Taxation Act, 2007* (Ontario), as modified by the *Electricity Act, 1998* and related regulations. This results in OPG effectively paying taxes similar to what would be imposed under the federal and Ontario tax acts.

OPG's operations are complex and the computation of the provision for income taxes involves interpretation of the various tax statutes and regulations. OPG has taken certain filing positions in calculating the amount of its income tax provision. These filing positions may be challenged on audit and some of them possibly disallowed, resulting in a potential significant change in OPG's tax provision upon reassessment.

OPG follows the liability method of accounting for income taxes. Under the liability method, deferred income tax assets and liabilities are determined based on differences between the accounting and tax bases of assets and liabilities. Deferred amounts are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. The effect of a change in tax rates on deferred income tax assets and liabilities is included in income in the period the change is enacted.

If management determines that it is more likely than not that some, or all, of a deferred income tax asset will not be realized, a valuation allowance is recorded to report the balance at the amount expected to be realized.

OPG recognizes deferred income taxes associated with its rate regulated operations and records an offsetting regulatory asset or liability for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers.

Tax benefits associated with income tax positions taken, or expected to be taken, in a tax return and in respect of investment tax credits are recorded only when the more likely than not recognition threshold is satisfied. Tax benefits and investment tax credits recognized are measured at the largest amount of benefit that is greater than 50 percent likely of being realized upon settlement.

Investment tax credits are recorded as a reduction to income tax expense. OPG classifies interest and penalties associated with unrecognized tax benefits as income tax expense.

The Company has recognized net deferred income tax liabilities of \$890 million as at December 31, 2015 (2014 – \$828 million).

#### Property, Plant and Equipment, Intangible Assets and Depreciation and Amortization

Property, plant and equipment (PP&E) and intangible assets are recorded at cost. Interest costs incurred during construction and development are capitalized as part of the cost of the asset, based on the interest rates on OPG's long-term debt. Expenditures for replacements of major components are capitalized.

Depreciation and amortization rates for the various classes of assets are based on their estimated service lives. Any asset removal costs that have not been specifically provided for in current or previous periods are charged to OM&A expenses. Repairs and maintenance costs are also expensed when incurred.

PP&E are depreciated on a straight-line basis except for computers and transport and work equipment, which are mostly depreciated on a declining balance basis. Intangible assets, which consist of major application software, are amortized on a straight-line basis.

The accounting estimates related to end-of-life assumptions for PP&E and intangible assets require significant management judgment, including consideration of various operating, technological, and other factors. OPG reviews the estimated useful lives for its PP&E and intangible assets on a regular basis.

## **Asset Impairment**

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The review is based on the presence of impairment indicators such as the future economic benefit of the assets and external market conditions. The net carrying amount of assets is considered impaired if it exceeds the sum of the estimated undiscounted cash flows expected to result from the asset's use and eventual disposition. In cases where the sum of the undiscounted expected future cash flows is less than the carrying amount, an impairment loss is recognized. This loss equals the amount by which the carrying amount exceeds the fair value. Fair value is determined using expected discounted cash flows when quoted market prices are not available. The impairment is recognized in income in the period in which it is identified.

Various assumptions and accounting estimates are required to determine whether an impairment loss should be recognized and, if so, the value of such loss. This includes factors such as short-term and long-term forecasts of prices for electricity generation under applicable revenue mechanisms, the demand for and supply of electricity, inservice dates of generating stations, inflation, fuel prices, capital expenditures and station useful lives.

The carrying value of investments accounted for under the equity method are reviewed for the presence of any indicators of impairment. If an impairment exists and is determined to be other-than-temporary, an impairment charge is recognized. This charge equals the amount by which the carrying value exceeds the investment's fair value.

# Nuclear Fixed Asset Removal and Nuclear Waste Management Funds

In accordance with the ONFA, OPG sets aside and invests funds that are held in segregated custodian and trustee accounts specifically for discharging its obligation for nuclear decommissioning and long-term nuclear waste management. The Decommissioning Fund was established to fund the future costs of nuclear fixed asset removal, long-term L&ILW management, and certain costs for used fuel storage incurred after the stations are shut down. The Used Fuel Fund was established to fund future costs of long-term nuclear used fuel management. OPG makes contributions to the Nuclear Funds based on the approved ONFA Reference Plans.

#### **Decommissioning Fund**

Upon termination of the ONFA, the Province has a right to any excess funds in the Decommissioning Fund. Accordingly, when the Decommissioning Fund is overfunded, OPG limits the earnings it recognizes in its consolidated financial statements by recording a payable to the Province, such that the balance of the Decommissioning Fund is equal to the cost estimate of the liability based on the most recently approved ONFA Reference Plan plus the portion of the surplus, if any, that OPG may direct to be treated as a contribution to the Used Fuel Fund. The payable to the Province could be reduced in subsequent periods in the event that the Decommissioning Fund earns less than its target rate of return or in the event that a new ONFA Reference Plan is approved with a higher estimated decommissioning liability.

Under the ONFA, if there is a surplus in the Decommissioning Fund such that the liabilities, as defined by the most recently approved ONFA Reference Plan, are at least 120 percent funded, OPG may direct up to 50 percent of the surplus over 120 percent to be treated as a contribution to the Used Fuel Fund, with the OEFC entitled to a distribution of an equal amount. Therefore, when the Decommissioning Fund is at least 120 percent funded, OPG

recognizes 50 percent of the excess greater than 120 percent in income. When the Decommissioning Fund is underfunded, the earnings on the fund reflect actual fund returns based on the market value of the assets.

## Used Fuel Fund

Under the ONFA, the Province guarantees OPG's annual return in the Used Fuel Fund at 3.25 percent plus the change in the Ontario CPI for funding related to the first 2.23 million used fuel bundles. OPG recognizes the committed return on the Used Fuel Fund and includes it in the earnings on the nuclear fixed asset removal and nuclear waste management funds. The difference between the committed return on the Used Fuel Fund and the actual market return determined based on the fair value of the fund's assets related to the first 2.23 million used fuel bundles is recorded as due to or due from the Province. The amount due to or due from the Province represents the amount OPG would pay to, or receive from the Province if the committed return were to be settled as of the consolidated balance sheet date.

Under the ONFA, the Province is entitled to any surplus in the Used Fuel Fund, subject to a threshold funded ratio of 110 percent compared to the value of the associated liabilities based on the most recently approved ONFA Reference Plan. Upon termination of the ONFA, the Province is entitled to any surplus above the 100 percent funded threshold.

As prescribed under the ONFA, OPG's contributions attributed to the used fuel bundles in excess of 2.23 million are not subject to the Province's guaranteed rate of return, and earn a return based on changes in the market value of the assets of the Used Fuel Fund.

The *Nuclear Safety and Control Act* (Canada) requires OPG to have sufficient funds available to discharge the current nuclear decommissioning and nuclear waste management liabilities. As required by the terms of the ONFA, the Province has provided a Provincial Guarantee to the CNSC, on behalf of OPG, for any shortfall between the CNSC consolidated financial guarantee requirement and the value of the Nuclear Funds. OPG pays the Province an annual guarantee fee equal to 0.5 percent of the amount of the Provincial Guarantee. The current value of the Provincial Guarantee of \$1,551 million is in effect through to the end of 2017. Based on this guarantee amount, OPG paid a guarantee fee of \$8 million to the Province for each of 2014 and 2015.

# **Pension and Other Post-Employment Benefits**

The determination of OPG's pension and OPEB costs and obligations is based on accounting policies and assumptions, as discussed below.

#### Accounting Policy

OPG's post-employment benefit programs consist of a contributory defined benefit registered pension plan, a defined benefit supplementary pension plan, and other post retirement benefits (OPRB) including group life insurance and health care benefits, and long-term disability (LTD) benefits. Post-employment benefit programs are also provided by the NWMO, which is consolidated into OPG's financial results. Unless otherwise noted, information on the Company's post-employment benefit programs is presented on a consolidated basis.

OPG accrues its obligations under pension and OPEB plans in accordance with US GAAP. The obligations for pension and OPRB are determined using the projected benefit method pro-rated on service. The obligation for LTD benefits is determined using the projected benefit method on a terminal basis. Pension and OPEB obligations are impacted by factors including interest rates, adjustments arising from plan amendments, demographic assumptions, experience gains or losses, salary levels, inflation, and health care cost escalation assumptions. Pension and OPEB costs and obligations are determined annually by independent actuaries using management's best estimate assumptions.

Pension fund assets include equity securities, corporate and government debt securities, pooled funds, real estate, infrastructure and other investments. These assets are managed by professional investment managers. The

pension fund does not invest in equity or debt securities issued by OPG. Pension fund assets are valued using market-related values for purposes of determining the amortization of actuarial gains or losses and the expected return on plan assets. The market-related value recognizes gains and losses on equity assets relative to a six percent assumed real return over a five-year period.

Pension and OPEB costs include current service costs, interest costs on the obligations, the expected return on pension plan assets, adjustments for plan amendments and adjustments for actuarial gains or losses, which result from changes in assumptions and experience gains and losses. Past service costs or credits arising from pension and OPRB plan amendments are amortized on a straight-line basis over the expected average remaining service life to full eligibility of the employees covered by the corresponding plan. Past service costs or credits arising from amendments to LTD benefits are immediately recognized as OPEB costs in the period incurred. Due to the long-term nature of pension and OPRB liabilities, the excess of the net cumulative unamortized gain or loss, over 10 percent of the greater of the benefit obligation and the market-related value of the plan assets (the corridor) for each plan is amortized over the expected average remaining service life of the employees covered by the company. Actuarial gains or losses for LTD benefits are immediately recognized as OPEB costs in the period incurred.

OPG recognizes on its consolidated balance sheets the funded status of its defined benefit plans. The funded status is measured as the difference between the fair value of plan assets and the benefit obligation, on a plan-by-plan basis.

Actuarial gains or losses and past service costs or credits arising during the year that are not recognized immediately as components of benefit costs are recognized as increases or decreases in other comprehensive income (OCI), net of income taxes. These unamortized amounts in AOCI are subsequently reclassified and recognized as amortization components of pension and OPRB costs as described above.

OPG records an offsetting regulatory asset or liability for the portion of the adjustments to AOCI that is attributable to the regulated operations in order to reflect the expected recovery or refund of these amounts through future regulated prices charged to customers. For the recoverable or refundable portion attributable to regulated operations, OPG records a corresponding change in this regulatory asset or liability for the amount of the increases or decreases in OCI and for the reclassification of AOCI amounts into benefit costs during the period.

When the recognition of the transfer of employees and employee-related benefits gives rise to both a curtailment and a settlement, the curtailment is accounted for prior to the settlement. A curtailment is the loss by employees of the right to earn future benefits under the plan. A settlement is the discharge of a plan's liability.

# Accounting Assumptions

Assumptions are significant inputs to actuarial models that measure pension and OPEB obligations and related effects on operations. Discount rate, inflation rate and changes in salary levels are three critical assumptions in the determination of benefit costs and obligations. In addition, the expected long-term rate of return on plan assets is a critical assumption in the determination of registered pension plan costs. These assumptions, as well as other assumptions involving demographic factors such as retirement age, mortality, and employee turnover, are evaluated periodically by management in consultation with independent actuaries. During the evaluation process, the assumptions are updated to reflect past experience and expectations for the future. Actual results in any given year will often differ from actuarial assumptions because of economic and other factors giving rise to actuarial gains and losses.

The discount rates, which are representative of the AA corporate bond yields, are used to calculate the present value of the expected future cash flows on the measurement date in order to determine the projected benefit obligations for the Company's employee benefit plans. A lower discount rate increases the benefit obligations and increases benefit costs. The expected rate of return on plan assets is based on the pension fund's asset allocation, as well as the

expected return considering long-term historical risks and returns associated with each asset class within the plan portfolio. A lower expected rate of return on plan assets increases pension cost.

## **Asset Retirement Obligation**

As at December 31, 2015, OPG's asset retirement obligation (ARO) was \$20,169 million (2014 – \$17,028 million). The obligation consists of fixed asset removal and nuclear waste management liabilities. The ARO is comprised of expected costs to be incurred up to and beyond termination of operations and the closure of nuclear and thermal generating plant facilities and other facilities. Costs will be incurred for activities such as preparation for safe storage, safe storage, dismantlement, demolition and disposal of facilities and equipment, remediation and restoration of sites, and the ongoing and long-term management of nuclear used fuel bundles and L&ILW material. The liabilities associated with the decommissioning the nuclear generating stations and the long-term management of used nuclear fuel comprise the most significant amounts of the total obligation.

The nuclear decommissioning liability represents the estimated costs of closing the nuclear stations after the end of their service lives, which includes preparation and placement of the stations into a safe state condition followed by an assumed 30-year safe store period prior to station dismantlement and site restoration. Activities associated with the placement of the stations into a safe state condition include de-fueling and de-watering of the nuclear reactors. Under the terms of the lease agreement with Bruce Power, OPG continues to be responsible for the Nuclear Liabilities associated with the Bruce nuclear generating stations. Under the lease agreement, Bruce Power must return the Bruce stations to OPG together, in a de-fueled and de-watered state. These de-watering and de-fueling costs are not part of OPG's ARO.

The life cycle costs of L&ILW management include the costs of processing and storage of such radioactive wastes during and following the operation of the nuclear stations, as well as the costs of the ultimate long-term management of these wastes. The current assumptions used to establish the obligation for these costs include an L&ILW DGR facility. To estimate the liability for nuclear used fuel management, OPG has adopted an approach consistent with the Adaptive Phased Management concept approved by the Government of Canada, which assumes a DGR as part of the long-term management of nuclear used fuel waste. The NWMO is responsible for the design and implementation of Canada's plan for the long-term management of used nuclear fuel.

The following costs are recognized as a liability on OPG's consolidated balance sheets:

- the present value of the costs of decommissioning the nuclear and thermal production facilities and other facilities after the end of their useful lives
- the present value of the fixed cost portion of nuclear waste management programs that are required based on the total volume of waste expected to be generated over the assumed lives of the stations
- the present value of the variable cost portion of nuclear waste management programs taking into account waste volumes generated to date.

The significant assumptions underlying operational and technical factors used in the calculation of the accrued liabilities are subject to periodic review. Changes to these assumptions, including changes to assumptions on the timing of the programs including construction of assumed waste disposal facilities, station end-of-life dates, waste disposal methods, financial indicators, decommissioning strategy, and the technology employed may result in significant changes to the value of the accrued liabilities. With programs of this duration and the evolving technology to handle nuclear waste, there is a significant degree of inherent uncertainty surrounding the measurement of the costs for these long-term programs. These costs may increase or decrease over time. The estimates for the Nuclear Liabilities are reviewed on an ongoing basis as part of the overall nuclear waste management program. A comprehensive reassessment of all underlying assumptions and baseline cost estimates for the Nuclear Liabilities is performed periodically. The most recent comprehensive update of the baseline cost estimates for the Nuclear Liabilities resulting from changes in assumptions or estimates that impact the amount or timing of the originally estimated undiscounted cash

flows are recorded as an adjustment to the liabilities. Any resulting changes in the related asset retirement costs are capitalized as part of the carrying amount of nuclear fixed assets.

For the purposes of calculating OPG's Nuclear Liabilities, as at December 31, 2015, consistent with the current accounting end-of-life assumptions, nuclear station decommissioning is projected to occur over approximately the next 50 years.

The liability for nuclear fixed asset removal and nuclear waste management on a present value basis as at December 31, 2015 was \$19,792 million (2014 – \$16,663 million). As at December 31, 2015, the undiscounted cash flows of expenditures for OPG's Nuclear Liabilities in 2015 dollars are as follows:

(millions of dollars)	2016	2017	2018	2019	2020	Thereafter	Total
Expenditures for nuclear fixed asset removal and nuclear waste management <sup>1</sup>	309	311	328	359	400	36,565	38,272

<sup>1</sup> The majority of the expenditures are expected to be reimbursed by OPG's Nuclear Funds as established by the ONFA. The contributions required under the ONFA are not included in these undiscounted cash flows but are reflected in the table under the heading, *Contractual and Commercial Commitments*. The Nuclear Funds are discussed in the *Critical Accounting Policies and Estimates* section under the heading, *Nuclear Fixed Asset Removal and Nuclear Waste Management Funds*.

The liability for non-nuclear fixed asset removal was \$377 million as at December 31, 2015 (2014 – \$365 million). This liability primarily represents the present value of estimated costs of decommissioning OPG's thermal generating stations at the end of their service lives. The liability reflects third party cost estimates based on an in-depth review of plant sites and an assessment of required clean-up and restoration activities. For the purpose of measuring the liability, asset removal activities are assumed to take place over approximately the next 15 years. The amount of undiscounted estimated future cash flows associated with the non-nuclear liabilities is approximately \$500 million.

OPG has no legal obligation associated with the decommissioning of its hydroelectric generating facilities and the costs cannot be reasonably estimated because of the long service life of these assets. With either maintenance efforts or rebuilding, the water control structures are assumed to be used for the foreseeable future. Accordingly, OPG has not recognized a liability for the decommissioning of its hydroelectric generating facilities.

# **Fair Value Measurements**

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly arm's-length transaction between market participants at the measurement date. Fair value measurements are required to reflect the assumptions that market participants would use in pricing an asset or liability based on the best available information. These assumptions include the risks inherent in a particular valuation technique, such as a pricing model, and the risks inherent in the inputs to the model.

The fair value of financial assets and liabilities for which quoted prices in an active market are available, including exchange traded derivatives and other financial instruments, are determined directly from those quoted market prices.

For financial instruments for which quoted market prices are not directly available, fair values are estimated using forward price curves developed from observable market prices or rates. The estimation of fair value may include the use of valuation techniques or models, based wherever possible on assumptions supported by observable market prices or rates prevailing at the consolidated balance sheet dates. This is the case for over-the-counter derivatives and securities, which include energy commodity derivatives, foreign exchange derivatives, interest rate swap derivatives, and fund investments. Pooled fund investments are valued at the unit values supplied by the pooled fund administrators. The unit values represent the underlying net assets at fair values, determined using closing market prices. Valuation models use general assumptions and market data and therefore do not reflect the specific risks and other factors that may affect a particular instrument's fair value. The methodologies used for calculating the fair value

adjustments are reviewed on an ongoing basis to ensure that they remain appropriate. If the valuation technique or model is not based on observable market data, specific valuation techniques are used, primarily based on recent comparable transactions, comparable benchmark information, bid/ask spread of similar transactions, and other relevant factors.

OPG's use of financial instruments exposes the Company to certain risks, including credit risk, foreign currency risk and interest rate risk. A discussion of how OPG manages these and other risks is found under the section, *Risk Management*.

# **Variable Interest Entities**

OPG holds a variable interest in the NWMO, of which it is the primary beneficiary. Accordingly, the applicable amounts in the accounts of the NWMO, after elimination of all significant intercompany transactions, are consolidated. Refer to Note 3 of OPG's 2015 audited consolidated financial statements for further details.

# CHANGES IN ACCOUNTING POLICIES AND ESTIMATES

# **Useful Lives of Nuclear Long-Lived Assets**

The accounting assumptions related to the estimated end-of-life dates for long-lived assets require significant management judgment, including consideration of various operational, technological and other factors. The station end-of-life assumptions also impact the measurement of OPG's ARO and impact other related accounting assumptions. OPG reviews the useful life assumptions for its generating stations on a regular basis.

In December 2015, OPG revised its accounting assumptions for the estimated useful lives of its nuclear generating stations. Effective December 31, 2015:

- the average service lives of the Bruce A GS and Bruce B GS were extended from 2048 to 2052 and from 2019 to 2061, respectively, to reflect the estimated end-of-life dates reflected in the updated refurbishment agreement between the IESO and Bruce Power, which was announced in December 2015
- the average service life of the Darlington GS was extended by one year to 2052 to reflect the approval of the refurbishment schedule in 2015
- the average service life of the Pickering GS was extended by less than one year to reflect the technical confidence that all six operating units of the station will operate to the end of 2020.

To reflect the above changes, OPG recognized a total increase of \$2,330 million in the Nuclear Liabilities and a corresponding increase in the related asset retirement costs capitalized to PP&E, effective December 31, 2015. These increases were primarily due to the changes in the estimated useful life of the Bruce B GS. The nuclear ARO associated with the Pickering GS and Darlington GS was impacted by the changes to the Bruce nuclear generating stations' useful lives because the costs of the fleet-wide waste management programs are shared by all of OPG's nuclear stations based on used nuclear fuel and waste volumes. Consistent with the changes in the end-of-life dates for the Bruce nuclear generating stations and the December 2015 amendments to the Bruce Lease, the term of the Bruce Lease was also extended, for accounting purposes, in line with the refurbishment plans for these stations.

The above changes in station end-of-life assumptions are expected to decrease total depreciation expense by approximately \$35 million in 2016, and to increase accretion expense by approximately \$75 million in 2016. The existing Bruce Lease Net Revenues Variance Account and a new deferral account proposed in OPG's December 2015 application to the OEB, discussed below, are expected to largely offset these impacts. The Bruce Lease Net Revenues Variance Account captures between OPG's revenues and costs related to the Bruce nuclear generating stations and the corresponding forecasts included in OEB-approved nuclear regulated prices.

In December 2015, as required by the OEB's previous decisions and orders, OPG applied to the OEB for an accounting order to establish a new deferral account to record, effective January 1, 2016, the revenue requirement impact on the prescribed nuclear facilities of changes to the Nuclear Liabilities and depreciation expense arising from the changes in the nuclear station end-of-life dates effective December 31, 2015. In January 2016, the OEB issued an order establishing the requested account on an interim basis to allow OPG to begin recording amounts into the account effective in January 2016. The OEB's final decision on the account is expected later in 2016.

# **Pension and Other Post-Employment Benefits**

The weighted average discount rate used to determine the projected pension benefit obligations and the projected benefit obligations for OPEB as at December 31, 2015 was 4.1 percent. This represents an increase, compared to the 4.0 percent discount rate that was used to determine the obligations as at December 31, 2014.

The deficit for the registered pension plans decreased, for accounting purposes, from \$3,262 million as at December 31, 2014 to \$2,315 million as at December 31, 2015, largely as a result of the return on pension fund assets in 2015, the increase in discount rates at the 2015 year-end, and employer contributions to the pension fund during the year, partially offset by the current service and interest costs for the year.

The projected benefit obligations for OPEB increased slightly from \$3,143 million as at December 31, 2014 to \$3,188 million as at December 31, 2015.

As at December 31, 2015, the unamortized net actuarial loss and unamortized past service costs for the pension and OPEB plans totalled \$3,646 million (2014 – \$4,869 million). Details of the unamortized net actuarial loss and unamortized past service costs as at December 31, 2015 and 2014 are as follows:

	<b>U</b> 11		nentary n Plans	Other Post- Employment Benefits		
(millions of dollars)	2015	2014	2015	2014	2015	2014
Net actuarial gain not yet subject to amortization due to use of market-related values	(809)	(878)	-	-	-	-
Net actuarial loss not subject to amortization due to use of the corridor	1,544	1,568	30	32	293	288
Net actuarial loss subject to amortization	2,288	3,443	47	65	247	350
Unamortized net actuarial loss	3,023	4,133	77	97	540	638
Unamortized past service costs	-	-	-	-	6	1

A change in the following assumptions holding all other assumptions constant, would increase (decrease) pension and OPEB costs for the year ended December 31, 2015, as follows:

(millions of dollars)	Registered Pension Plans <sup>1</sup>	Supplementary Pension Plans <sup>1</sup>	Other Post- Employment Benefits <sup>1</sup>	
Expected long-term rate of return	(22)	,	,	
0.25% increase	(28)	n/a	n/a	
0.25% decrease	28	n/a	n/a	
Discount rate				
0.25% increase	(62)	(1)	(13)	
0.25% decrease	65	1	14	
Inflation				
0.25% increase	106	2	1	
0.25% decrease	(99)	(1)	(1)	
Salary increases				
0.25% increase	24	3	1	
0.25% decrease	(24)	(2)	(1)	
Health care cost trend rate				
1% increase	n/a	n/a	84	
1% decrease	n/a	n/a	(60)	

n/a - change in assumption not applicable.

<sup>1</sup> Excludes the impact of regulatory variance and deferral accounts.

#### **Recent Accounting Pronouncements**

The recent US GAAP accounting pronouncements related to revenue recognition and lease accounting are described below. Other recent accounting pronouncements applicable to OPG are outlined in Note 3 of the audited consolidated financial statements.

#### Revenue from Contracts with Customers

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update No. 2014-09, *Revenue from Contracts with Customers* (ASU 2014-09), which supersedes nearly all existing revenue recognition guidance, including industry-specific guidance, under US GAAP. The core principle of ASU 2014-09 is to recognize revenues when promised goods or services are transferred to customers, in an amount that reflects the consideration to which an entity expects to be entitled for those goods or services. In July 2015, the FASB approved the deferral of the effective date of the new revenue standard by one year from 2017 to 2018, for public entities reporting under US GAAP. As such, the standard is expected to be applicable to OPG for its 2018 fiscal year, including interim periods. OPG is currently assessing the impact of the new standard on its consolidated financial statements.

#### Lease Accounting

In February 2016, the FASB issued the accounting update for ASC Topic 840, *Leases*. The update includes comprehensive changes to existing guidance for lease accounting, particularly for lessees. The standard is expected to be effective for OPG's 2019 fiscal year, including interim periods. Early adoption is permitted. OPG is currently assessing the impact of the new standard on its consolidated financial statements.

## **RISK MANAGEMENT**

#### **Overview**

OPG faces various risks that could significantly impact the achievement of its strategic, operational, financial, environmental, and health and safety goals. The objective of risk management is to identify and mitigate these risks, and to preserve and increase the value of the Shareholder's investment in the Company.

## **Risk Governance Structure**

During the first quarter of 2016, OPG's Board of Directors implemented a revised committee structure by streamlining its current standing committees from six to four. The changes include the merger of the former Audit and Finance Committee and the former Risk Oversight Committee to form the Audit and Risk Committee (ARC) of the Board of Directors. One of the ARC's responsibilities is to assist the Board of Directors in fulfilling its oversight responsibilities for matters relating to the identification and management of the Company's key business risks. An Executive Risk Committee (ERC), which is comprised of business unit leaders and the Chief Risk Officer (CRO), assists the ARC in fulfilling its governance and oversight responsibilities related to OPG's risk management activities.

## **Risk Management Activities**

OPG faces a wide array of risks as a result of its business operations. OPG's Enterprise Risk Management (ERM) framework is designed to identify and evaluate risks on the basis of their potential impact on the Company's capacity to achieve specific strategic and business plan objectives.

The quarterly risk management reporting activities are coordinated by a centralized ERM group led by the CRO. The activities begin with business units identifying, reviewing, and assessing risks that could prevent achievement of their business plan objectives. The ERM group reviews, validates, and consolidates this information and prioritizes risks based on their potential to impact OPG's overall business objectives. The ERM group also assesses external developments that may have implications on the corporate risk profile and facilitates the identification and assessment of emerging risks. The ERC then reviews the prioritized risks to determine the top risks to the Company. OPG's ERM process facilitates the monitoring of risk management activities for identified key risks. This allows the ERM group to report significant developments to the ERC and the ARC on a quarterly basis.

Senior management sets risk limits for the financing, procurement, and trading activities of the Company. Senior management also ensures that effective risk management policies and processes are in place to ensure compliance with such limits in order to maintain an appropriate balance between risk and return.

For the purpose of disclosure in this MD&A, a number of key risks are presented in five main categories, namely operational, financial, regulatory and legislative, enterprise-wide, and environmental. For each category, the key risks are briefly described below.

#### **Operational Risks**

#### **Risks Associated with Existing Generating Stations**

OPG is exposed to variable output from its existing generating stations that could adversely impact its financial performance.

Operational risks are the risks normally inherent in the operation of electricity generating facilities. These risks can lead to interruptions in the operations of generating stations or uncertainty in future production. The operational risks of a station are generally a function of its age and the technology used.

## Nuclear Generating Stations

Operating an aging nuclear fleet exposes OPG to unique risks such as unplanned outages, an increase in operating costs, and risks associated with nuclear waste management operations.

Operating nuclear stations exposes OPG to unique risks, such as greater-than-anticipated deterioration of station components and systems, risks associated with the nuclear industry, supply chain and vendor quality, risks related to the handling, storage and disposal of nuclear waste, and the risk of a nuclear accident. The primary implications of these risks include additional safety requirements, potentially lower than expected generation and revenues, and potentially higher operating costs.

The uncertainty associated with production by OPG's Canadian Deuterium Uranium (CANDU) nuclear generating units is primarily driven by the condition of station components and systems, which are all subject to the effects of aging. Fuel channels are expected to be the most life-limiting component affecting station end-of-life. Another significant factor identified to date includes degradation of primary heat transport pump motors at the Darlington GS. Additionally, there are fuel handling performance challenges at both the Darlington GS and Pickering GS. To respond to these risks, OPG continues to monitor performance, implement extensive inspection and maintenance programs, identify corrective actions and undertake projects required to operate reliably and within design parameters.

Deterioration of station components may progress in an unexpected manner, resulting in the need to increase monitoring, conduct extensive repairs, or undertake additional remedial measures. To maintain a safe operating margin, a nuclear unit could be derated resulting in reduced generation. When an unexpected condition first appears, a specific monitoring program is established. The primary impact of these conditions on OPG is an increase in the long-term cost of operations. The associated mitigation may create additional outage work, increasing the number of outages or extending planned outages.

The process of generating electricity by nuclear generating stations produces nuclear waste. As required by the CNSC, OPG is accountable for the management of used fuel and L&ILW, and decommissioning of its nuclear stations and waste management facilities, including the stations on lease to Bruce Power. Currently, there are no licenced facilities in Canada for the permanent disposal of nuclear used fuel or L&ILW.

The NWMO has developed a process for moving forward with Adaptive Phased Management as the long-term solution for Canada's nuclear fuel waste. In the interim, OPG is storing and managing used fuel at its nuclear generating station sites.

# Deep Geologic Repository for Low and Intermediate Level Waste

OPG, with the support of Bruce County municipalities, is proposing to construct and operate a DGR to address the need for the long-term management of L&ILW from OPG-owned nuclear generating stations. While broad local community support for the proposed L&ILW DGR is stable, there are pockets of opposition to the project which exist in the local communities as well as in Sarnia, Michigan, and Illinois. Special interest group opposition to deep geologic disposal of L&ILW may require OPG to respond accordingly in order to satisfy major stakeholders.

In May 2015, the JRP submitted its report and recommendations on the EA for OPG's proposed L&ILW DGR to the federal Minister of Environment. The report concluded that, given mitigation, there is unlikely to be significant environmental impact from the project and recommended that the Minister approve the EA. In February 2016, the federal Minister requested additional information on certain aspects of the EA for the proposed L&ILW DGR, including information related to alternate locations for the project and the impact on environmental effects if the NWMO's future used fuel repository were located in close proximity to the proposed L&ILW DGR. OPG is to inform the CEAA by April 18, 2016 when it anticipates to submit the requested information.

There is a risk of further delays to the EA approval and/or the issuance of the site preparation and construction licence from potential additional regulatory, political, legal or other requirements. Other factors impacting the residual risk associated with the L&ILW DGR project include support for its construction from the Saugeen Ojibway Nations, and reductions in political and social support for the project.

# Pickering Extended Operations to 2024

In January 2016, the Province of Ontario announced its approval of OPG's plan to pursue the continued safe and reliable operation of the Pickering GS to 2024. Under OPG's plan, all six operating units at the Pickering GS would operate until 2022, at which point two units would be shut down and the remaining four units would continue to operate until 2024.

Inability to achieve Pickering extended operations as planned would result in a reduction of OPG's future generation revenue and cash flows and lead to the advancement of shutdown and station decommissioning expenditures.

Risk factors for continued operation of the Pickering units include the discovery of unexpected conditions, equipment failures, the state of critical plant components that are reaching end-of-life, and a requirement for significant plant modifications. To mitigate these risks, OPG continues to undertake a number of activities which include the following:

- work on fuel channel life cycle management
- component condition assessments to identify the work required to support the extended operation of the station
- modification of the operating and maintenance strategy to support continued operation of the station.

Over the remaining lifespan of the station, risks such as performance of the fuel handling system, challenges with parts procurement, and a shortage of qualified human resources may challenge operational excellence at the Pickering GS. OPG is addressing these risks by taking appropriate actions, including undertaking fuel handling reliability improvements, equipment modifications and targeted investments in plant systems and components, supply chain initiatives, and developing workforce planning and resourcing strategies. In 2015, this has resulted in the Pickering GS achieving the best ever reliability in the history of the station.

# Darlington Operations

OPG is managing risks related to the Darlington GS operations by addressing ongoing technical challenges related to the obsolescence and aging of station components, including fuel handling equipment and fuel channels. There is also a significant risk associated with the degradation of the primary heat transport pump motors. The Darlington GS has already replaced certain high priority pump motors, and there is a plan in place to replace the remaining degraded pump motors.

# Hydroelectric Generating Stations

# OPG's hydroelectric generation is exposed to risks associated with water flows, the age of plant and equipment, and dam safety.

The extent to which OPG can operate its hydroelectric generation facilities depends upon the availability of water. Significant variability in weather, including impacts of climate change, could affect water flows. OPG manages this risk by using production forecasting models that incorporate water availability conditions, unit efficiency characteristics and outage plans. Inputs to the models are assessed, monitored and adjusted on an ongoing basis. For OPG's regulated hydroelectric generation, the financial impacts of variability in electricity production due to differences between the forecast water conditions underpinning the hydroelectric regulated prices and the actual water conditions are captured in the OEB-approved Hydroelectric Water Conditions Variance Account.

OPG's hydroelectric generating stations vary in age and the majority of the hydroelectric generating equipment is over 50 years old. The age of the equipment and civil components creates risks to the reliability of some

hydroelectric generating stations. OPG manages these risks by performing inspection and maintenance of critical components and by reviewing mitigating actions. In addition, OPG conducts detailed engineering reviews and station condition assessments on an ongoing basis. These reviews and assessments help to identify future work required to sustain and, as appropriate, upgrade a station.

The hydroelectric facilities operate 240 dams across Ontario. Dam safety legislation does not currently exist in the province. In August 2011, the Ministry of Natural Resources (now the MNRF) published a set of technical guidelines following a period of public consultation. These technical guidelines, which are not a regulation, represent the government standards for dam safety. In general, OPG's practices in the area of dam safety and public safety around dams exceed the minimum requirements outlined in the MNRF technical guidelines. In addition, OPG is developing a new risk-informed approach on behalf of the MNRF to prioritize the outcomes of dam safety assessments. OPG could eventually incur additional costs for certain dams that it operates in order to comply with any new requirements.

# Thermal Generating Stations

Preserving the option for Lambton GS units to run on alternate fuels requires OPG to incur additional operating costs that may not be recovered.

The Lambton GS ceased generating electricity in 2013. OPG has placed generating units of the Lambton GS in a reserve status and is currently preserving the option of converting the units to natural gas in the future, should they be required. Maintaining the units in the preserved state requires OPG to incur operating costs, and there is no mechanism currently in place to recover these costs. In 2015, OPG decided that it would revisit the decision to continue to preserve the Lambton GS in conjunction with Ontario's next LTEP.

Any future decision to convert the Lambton GS units to alternate fuels would be dependent upon obtaining appropriate energy supply agreements or other revenue contracts.

# Risks Associated with Major Development Projects

The risks associated with the cost, schedule, and technical aspects of the major development projects could adversely impact OPG's financial performance and its corporate reputation.

OPG is undertaking several capital intensive projects with significant investments. There may be an adverse effect on the Company if it is unable to: obtain necessary approvals; raise the necessary funds; effectively manage the projects; or fully recover capital costs and earn an appropriate return on investment in a timely manner. These projects may also have a significant impact on OPG's borrowing capacity and credit rating. Some projects may be ultimately reassessed as being uneconomic. Major development projects currently include the Darlington Refurbishment project, the construction of the Peter Sutherland Sr. GS, and other hydroelectric projects.

# Darlington Refurbishment

In November 2015, OPG's Board of Directors approved the four-unit budget and schedule to refurbish the Darlington GS and, in January 2016, the Province announced that Ontario is moving forward with the refurbishment of the station. The Province approved the execution of refurbishment for the first unit, Unit 2, which is scheduled to commence in October 2016. OPG is required to seek the Province's approval prior to refurbishing each remaining unit. Independent, third-party oversight is being established for the execution phase of the project, for both the project executive team and OPG's Board of Directors. The Ontario Ministry of Energy has retained an external advisor to provide oversight of the project, reporting to the Minister of Energy.

OPG is responsible for the management of the Darlington Refurbishment project, including the project's budget and schedule, and continues to systematically manage all of the risks associated with the project through robust risk management practices. There are financial and reputational risk exposures for OPG if actual costs exceed the budget or if OPG does not meet the project schedule. In addition, failure to achieve the objectives of the

refurbishment project may result in future forced outages and more complex planned outages, potentially impacting the post-refurbishment performance or useful life of the station. Failure to carry out the refurbishment of the first unit as planned may result in the Province not proceeding with OPG's refurbishment of the remaining units, which, together with the end of commercial operations at the Pickering GS, could result in most of OPG's nuclear units shutting down by the early to mid 2020s.

To mitigate the above risks and to build on major lessons learned from other nuclear refurbishments and large scale, complex projects, OPG engaged in an extensive five-year project planning phase in order to determine the project scope and rigorously estimate costs in keeping with best practices. In order to fully define the scope and material requirements for the project, the planning phase included the completion of detailed designs before proceeding with the execution of the unit refurbishments. Further risk mitigation has been implemented through the construction of a full scale model training reactor, which allows for simulations of unit refurbishment tasks that will be carried out during the execution phase of the project.

A large portion of the costs for the Darlington Refurbishment project is paid to contractors and suppliers, including vendors that will engineer, procure, and construct components of the project. There is a risk that, as the volume of work increases significantly, vendor performance shortfalls may impact project objectives and deliverables. OPG's risk management strategy aims to ensure that contractors are held accountable and appropriate off-ramps are in place. In mitigating its overall financial risk, OPG utilizes a contracting strategy that aims to share the risk with key vendors in a cost effective manner, where appropriate. There is also an increased risk of contractor initiated safety events, which may impact OPG's reputation. Mitigating actions include collaborative execution phase planning, active risk management, increased field presence by supervisory staff and assisting vendors in removing barriers to work. OPG is also managing other ongoing risks, such as those related to continuity of skilled leaders within OPG and its vendor partners, as well as the availability of technical resources to support the project through execution.

# Other Development Projects

Projects that are in the initial development stages are subject to schedule delays or possible cancellation due to unforeseen delays in receiving permits or approvals or establishing sufficient certainty regarding project cost recovery through revenue mechanisms, which may involve various external stakeholders. OPG attempts to mitigate these risks through early involvement and regular communication with applicable government agencies, close consultation with external stakeholders, and ongoing monitoring of contractor compliance relative to permits. Projects in the execution phase are subject to inherent risks related to performance against approved budgets and schedules. Mitigating activities for the risks include performing detailed engineering designs before proceeding with execution, engaging qualified and experienced vendors, and effectively monitoring and controlling performance.

Development projects could also be faced with increasing costs for equipment and construction that could impact their economic viability. OPG continuously monitors such trends in costs in order to identify emerging issues and seeks to manage and limit cost increases through contracting strategies, where possible.

# **Financial Risks**

# OPG is exposed to a number of discrete market-related risks that could adversely impact its financial and operating performance.

OPG is exposed to a number of financial risks, many of which arise due to OPG's exposure to volatility in commodity and equity markets, and interest rate fluctuations. This includes the Company's pension and OPEB obligations and costs that are impacted by market and interest rate fluctuations. OPG manages this complex array of risks with a view to reduce the uncertainty and/or mitigate the potential unfavourable impact on the Company's financial results.

# Commodity Markets

Changes in the market price of fuels used to produce electricity can adversely impact OPG's earnings and cash flow from operations.

To manage the risk of unpredictable increases in the price of fuels, the Company has fuel hedging programs, which include using fixed price and indexed contracts.

The percentages hedged of OPG's fuel requirements are shown in the following table. These amounts are based on yearly forecasts of generation and supply mix and, as such, are subject to change as these forecasts are updated.

	2016	2017	2018
Estimated fuel requirements hedged <sup>1</sup>	75%	69%	66%

Represents the approximate portion of MWh of expected generation production and year-end inventory targets from each type of facility (nuclear and thermal) for which OPG has entered into contractual arrangements or obligations in order to secure the price of fuel. Excess fuel inventories in a given year are attributed to the next year for the purpose of measuring hedge ratios.

# **Financial Markets**

The market value of investments held by OPG's Nuclear Funds and registered pension plan could be significantly affected by changes in various market factors such as equity prices, interest rates, inflation, and commodity prices.

# Nuclear Funds Market Risk

Investments in the Nuclear Funds are allocated to certain asset classes including fixed income securities, domestic and international equity securities, pooled funds, infrastructure, agriculture and Canadian real estate. These funds are managed to achieve, in the long term, the target rate of return based on the discount rate specified in the ONFA, in order to fund the expenditures associated with the long-term management of used fuel and L&ILW after station shutdown, and the decommissioning of OPG's nuclear stations and waste management facilities. The rates of return earned on these segregated funds are subject to various factors including the current and future financial market conditions, which are inherently uncertain. The asset mix of the funds is determined jointly by OPG and the Province in accordance with the ONFA.

For the Used Fuel Fund, the Province guarantees the annual rate of return at 3.25 percent plus the change in the Ontario CPI for the portion of the fund attributed to the first 2.23 million nuclear fuel bundles. As such, a change in the portion of the fund's value attributed to the first 2.23 million bundles impacts OPG's earnings to the extent of changes in the Ontario CPI. OPG assumes the market risk for the investment of funds set aside in the Used Fuel Fund for incremental bundles in excess of 2.23 million.

The performance of the portion of the Nuclear Funds attributed to the nuclear generating stations leased to Bruce Power is subject to the OEB-authorized Bruce Lease Net Revenues Variance Account. The variance account partially mitigates market risk related to the Nuclear Funds as it captures the differences between actual and forecast earnings from the Nuclear Funds related to the stations leased to Bruce Power. Forecast earnings are those approved by the OEB in setting regulated nuclear prices.

Residual risk to OPG's financial results continues to exist due to volatility in the financial and commodity markets, particularly with respect to the performance of the Nuclear Funds.

# Post-Employment Benefit Obligations Risk

OPG's post-employment benefit obligations include pension, group life insurance, health care benefits, and LTD benefits. OPG's post-employment benefit obligations and costs, and OPG's pension plan contributions could be materially affected in the future by numerous factors, including: changes in discount rates, inflation rates, and other actuarial assumptions; future investment returns; experience gains and losses; the funded status of the pension plans; changes in benefits; changes in the regulatory environment including potential changes to the *Pension Benefits Act* (Ontario); changes in OPG's operations; and the measurement uncertainty incorporated into the actuarial valuation process.

The OPG registered pension plan, which covers most of OPG's employees and retirees, is a contributory defined benefit plan that is indexed to inflation. Contributions to the OPG registered pension plan are determined by actuarial valuations, which are filed with the appropriate regulatory authorities at least every three years. The most recent actuarial valuation of the OPG registered pension plan, covering the three-year period to the end of 2016, was completed as of January 1, 2014. There is an inherent risk that future actuarial valuations could increase OPG's funding requirements due to market and economic-related conditions. A significant decline in the financial markets could trigger an immediate requirement to update the actuarial valuation based on declines in the funded status. OPG continues to assess the requirements for contributions to the registered pension plan, including the timing of actuarial valuations. The next actuarial valuation of the OPG registered plan must have an actuarial valuation date no later than January 1, 2017. OPG's OPEB obligations are not funded and the associated employee benefits are paid from cash flow provided by operating activities.

# Foreign Exchange

OPG's earnings and cash flows can be affected by movements in the United States dollar relative to the Canadian dollar.

OPG's financial results are exposed to volatility in the Canadian/US foreign exchange rate as fuels and certain supplies and services purchased for generating stations and major development projects are primarily denominated in, or tied to US dollars (USD). To manage this risk, OPG employs various financial instruments such as forwards and other derivative contracts, in accordance with approved risk management policies. As at December 31, 2015, OPG had total foreign exchange contracts outstanding with a notional value of USD \$3 million.

# Trading

# OPG's financial performance can be affected by its trading activities.

OPG's trading operations are closely monitored, with total exposures measured and reported to senior management on a daily basis. The main metric used to measure the financial risk of trading activity is Value at Risk (VaR). VaR is defined as a probabilistic maximum potential future loss expressed in monetary terms for a portfolio based on normal market conditions over a set period of time. During 2015, the VaR utilization ranged between nil and \$1.5 million, compared to between nil and \$4.2 million in 2014.

# Credit

# Deterioration in counterparty credit and non-performance by suppliers and contractors can adversely impact OPG's earnings and cash flows from operations.

The Company's credit risk exposure is a function of its electricity sales, trading and hedging activities, treasury activities including investing, and commercial transactions with various suppliers of goods and services. OPG's credit risk exposure relating to electricity sales is considered low as the majority of sales are through the IESO-administered spot market. The IESO oversees the credit worthiness of all market participants. In accordance with the IESO's prudential support requirements, market participants are required to provide collateral to cover funds that they might owe to the market.

Other major components of OPG's credit risk exposure include those associated with vendors that are contracted to provide services or products. The Company manages its exposure to various suppliers or counterparties by evaluating their financial condition and ensuring that appropriate collateral or other forms of security are held by OPG.

The following table summarizes OPG's credit exposure to all counterparties from electricity transactions and trading as at December 31, 2015:

			Potential Exposure for Largest Counterparties		
Credit Rating <sup>1</sup>	Number of Counterparties <sup>2</sup>	Potential Exposure <sup>3</sup> (million of dollars)	Number of Counterparties	Counterparty Exposure (million of dollars)	
Investment grade	10 1	26 378	5 1	25 378	
Total	11	404	6	403	

<sup>1</sup> Credit ratings are based on OPG's own analysis, taking into consideration external rating agency analysis where available, as well as recognizing explicit credit support provided through parental guarantees, Letters of Credit or other forms of security.

<sup>2</sup> OPG's counterparties are defined on the basis of individual master agreements.

<sup>3</sup> Potential exposure is OPG's statistical assessment of maximum exposure over the life of each transaction at a 95 percent confidence interval.

<sup>4</sup> Credit exposure is an estimate of the receivable amount arising from OPG's electricity sales into the IESO market. This excludes all items pertaining to contracts with the IESO. The credit exposure and associated receivable vary each month based on electricity sales. The monthly receivable from the IESO is typically paid to OPG in the subsequent month as per the IESO payment schedule.

# Liquidity

# Rising liquidity requirements can impact OPG's capital investment projects and ability to meet financial obligations.

OPG operates in a capital intensive business. Significant financial resources are required to fund major development and other capital improvement projects, including the Darlington Refurbishment project. In addition, the Company has other significant disbursement requirements including funding obligations under the ONFA, pension contributions, payments towards OPEB and other benefit plans, debt maturities with the OEFC, and investments in new generating capacity and other business growth opportunities. OPG must ensure that it has the financial capacity and sufficient access to cost-effective financing sources to fund its capital requirements and other disbursements. In support of this objective, OPG utilizes multiple sources and forecasts availability of funds, actively monitors funding requirements, and is focused on maintaining its investment grade credit rating. A discussion of corporate liquidity is included under the section, *Liquidity and Capital Resources*.

# Nuclear Waste Management and Decommissioning Obligations, and Nuclear Funds

The cost estimates for nuclear waste management and decommissioning obligations are based on assumptions that evolve over time and could impact OPG's future contributions to the Nuclear Funds to cover these obligations.

As required by the CNSC, OPG is responsible for the management of used nuclear fuel and L&ILW, and the decommissioning of its nuclear stations and waste management facilities, including the stations on lease to Bruce Power. OPG is required by various rules and regulations to provide cost estimates associated with its nuclear waste management and decommissioning obligations, including for updating ONFA Reference Plans. OPG's contributions to the Nuclear Funds are determined by approved ONFA Reference Plans, which are required to be updated at least every five years.

The cost estimates for nuclear waste management and decommissioning obligations are based on numerous underlying assumptions and estimates that are inherently uncertain. The assumptions include station end-of-life dates, waste volumes, waste disposal methods, the timing of construction of assumed waste disposal facilities, waste packaging systems, decommissioning strategy, and financial indicators. To address the inherent uncertainty, OPG

undertakes to perform a comprehensive review of the underlying assumptions and baseline cost estimates at least once every five years, in line with the ONFA Reference Plan update process. Certain underlying assumptions, such as station end-of-life dates, are reviewed annually, with resulting changes assessed for their impact to the liability. Changing business decisions, such as premature unit closures and refurbishment decisions, are reviewed as they occur, with the existing baseline cost information used to estimate the impacts to the obligations. Should changing circumstances be assessed as material or significant, an early re-assessment of baseline costs could be performed before the five-year period is completed.

OPG is currently reviewing its estimates for the nuclear waste management and decommissioning obligations. A comprehensive reassessment of the underlying assumptions and lifecycle baseline cost estimates is expected to be completed and results submitted to the Province for review and approval in 2016 as part of the ONFA Reference Plan update process. The updated ONFA Reference Plan is expected to be effective January 1, 2017.

An adjustment to OPG's ARO for nuclear waste management and decommissioning, with a corresponding increase in capitalized asset retirement costs, was recorded on December 31, 2015 as a result of changes in accounting assumptions for the useful lives of the Bruce nuclear generating stations. The stations' useful lives were extended to reflect the Province's endorsement of Bruce Power's refurbishment plans for the unrefurbished units and the updated refurbishment contract between Bruce Power and IESO, as discussed further under the heading, *Changes in Accounting Policies and Estimates*. The impact of this change will be reflected in the next ONFA Reference Plan.

The changes in contribution levels based on approved ONFA Reference Plans are determined based on changes in the values of the Nuclear Funds as well as changes in the associated nuclear waste management and decommissioning obligations. An increase in the obligations, including from an increase in baseline cost estimates or changes in the decommissioning strategy, or a decrease in the value of the Nuclear Funds could increase OPG's future required contributions under the ONFA.

# Acquisition of Hydro One Shares

As part of the renewed collective bargaining agreements with the PWU and The Society, OPG will need to acquire shares of Hydro One to award to qualifying employees during the 15-year periods commencing on April 1, 2017 and January 1, 2018, respectively. The number of shares to be awarded to each qualifying employee during these periods is fixed by the terms of the collective bargaining agreements. There is a financial risk associated with these future transactions as the value of future awards will be dependent on the market price of the shares at the time of the award. OPG is currently evaluating strategies to mitigate this risk.

# **Regulatory and Legislative Risks**

OPG is subject to extensive federal and provincial legislation and regulation that have an impact on the Company's operations and financial position.

OPG is subject to regulation by various entities including the OEB and the CNSC. The risks that arise from being a regulated entity include: the potential inability to receive full recovery of capital and operating costs; reductions in earnings; and increases in operating costs. Where possible, these unfavourable impacts are mitigated by maintaining ongoing communication with regulators and other authoritative bodies to ensure early identification and discussion of issues.

# Rate Regulation

Significant uncertainties remain regarding the outcome of rate and generic proceedings for OPG's rate regulated operations.

The prices for electricity generated from OPG's prescribed facilities are generally determined by the OEB using forecast information. In 2016, OPG plans to file a 5-year rate application with the OEB for new regulated prices for production from its regulated hydroelectric and nuclear facilities, effective in 2017. The OEB has previously

expressed an expectation that these prices would be determined on the basis of an incentive regulation ratemaking methodology for the hydroelectric operations, and a multi-year forecast cost of service ratemaking approach with incentive regulation features for the nuclear operations. There is an inherent risk that the new prices established by the OEB on the above basis may not provide for recovery of all actual costs incurred by OPG's regulated operations, or may not allow the regulated operations to earn an appropriate rate of return based on actual results. OPG's objectives with respect to its regulated operations are to clearly demonstrate to the OEB that the costs for the regulated operations are being prudently incurred and should be fully recovered, and to earn an appropriate return on the investment in the regulated assets.

Consistent with the November 2015 amendment to *Ontario Regulation 53/05*, OPG plans to incorporate a rate smoothing proposal into its 2016 application for nuclear regulated prices, with a view of making more stable year-over-year changes in the nuclear base regulated prices during the Darlington Refurbishment project period. Under rate smoothing, the collection of a portion of the approved revenue requirement is deferred into the future. According to *Ontario Regulation 53/05*, the deferred portion will be determined by the OEB. There is an inherent risk that the magnitude of the deferral ordered by the OEB will result in regulated prices that do not provide sufficient cash flow to the Company for meeting its financial objectives in the optimal manner, including ensuring sufficient liquidity, cost effectively funding the Darlington Refurbishment project and other expenditures, and maintaining the Company's investment grade credit rating.

In September 2015, the Supreme Court upheld the OEB's disallowance of a portion of OPG's forecast nuclear compensation costs for the 2011-2012 period that were based on previously negotiated collective agreements. The decision underscores that OPG must continue to establish the reasonableness of both committed and future costs as part of the rate-setting process, in support of requested rates required to operate and invest into the business and to deliver expected returns to the Province. For further details on the Supreme Court's decision, refer to the disclosure under the heading, *Recent Developments*.

The OEB is currently conducting a consultation in the gas and electricity sectors to develop standard principles to guide the OEB's review of pension and OPEB costs for rate-regulated utilities, including establishing appropriate regulatory mechanisms for cost recovery. The OEB's November 2014 decision establishing OPG's existing regulated prices indicated that a change in the recovery methodology for OPG's pension and OPEB costs from the accrual basis, if required, would be addressed in OPG's next rate proceeding, having been informed by the outcome of the OEB's generic proceeding on the regulatory treatment and recovery of pension and OPEB costs. The decision also stated that the future recovery, if any, of amounts recorded in the Pension & OPEB Cash Versus Accrual Differential Deferral Account authorized by that decision also would be subject to the outcome of the generic proceeding. As such, the outcome of the current consultation could have a material impact on OPG's ability to recover full pension and OPEB costs in the future. The outcome of the consultation and future OEB proceedings can have significant adverse implications on OPG's future financial results, including adjustments to the regulatory assets for the Pension & OPEB Cash Versus Accrual Differential Deferral Account and unamortized pension and OPEB amounts recorded in AOCI.

# Legislative Risks

OPG is subject to extensive federal and provincial legislation and regulations that have an impact on the Company's operations and financial position.

OPG's core business and strategy may be impacted by changes in federal and provincial legislation. To mitigate legislative risks, OPG continues to monitor and actively engage with the federal and provincial governments in order to determine if future legislation will impact the Company.

## Nuclear Regulatory Requirements

# An aging nuclear fleet or changes in technical codes, regulations or laws may increase the risk of additional nuclear regulatory requirements.

The uncertainty associated with nuclear regulatory requirements is primarily driven by plant aging, changes to technical codes, and challenges raised by the public at regulatory hearings, particularly in the area of emergency preparedness. Addressing these requirements could add to the cost of operations, and in some instances, may result in a reduction or elimination of the productive capacity of a station, or in an earlier than planned replacement of a station component. Additionally, the operations of nuclear stations are often directly impacted by circumstances or events that occur at other nuclear stations globally. These circumstances or events may lead to CNSC regulatory changes with a significant impact on the cost and future operation of OPG's nuclear fleet.

The generating units of the Darlington GS are approaching their originally designed end-of-life. In December 2015, the CNSC granted the station a 10-year operating licence, valid until November 30, 2025. The new licence spans most of the planned duration of the Darlington Refurbishment project, which provides greater regulatory stability and reduces regulatory risk.

In January 2014, the federal government introduced Bill C-22 which contains a new *Nuclear Liability and Compensation Act* (NLCA). This bill received Royal Assent in February 2015, and the act is expected to come into effect by the end of 2016. The NLCA will increase OPG's nuclear liability limit from \$75 million to an initial \$650 million, with successive annual increases to \$750 million, \$850 million, and \$1 billion. OPG is assessing the impact of the increased liability limit on the insurance limits and premiums available to Canadian nuclear operators.

# **Enterprise-Wide Risks**

OPG's business prospects could be adversely affected by various enterprise-wide risks such as those related to electricity demand and supply, human resources, health and safety, and corporate reputation. Significant risks that could have a potential enterprise-wide impact on OPG's business, reputation, financial condition, operating results and prospects are discussed below.

#### **Ontario Electricity Market**

# Ontario electricity market conditions could impact OPG's revenue and operations.

OPG's revenue is impacted by many external factors including: the entrance of new participants into the Ontario market; the competitive actions of market participants; Ontario electricity demand; changes in the regulatory environment; and wholesale electricity prices in the interconnected markets.

SBG has, and will continue to be, an issue in Ontario when electricity supply exceeds demand. For OPG, SBG can cause spilling of water at hydroelectric stations and reductions in generation from nuclear facilities, and add to the wear and tear of station equipment due to increased dispatch. To manage SBG conditions, the IESO may require OPG to reduce hydroelectric generation and spill water. Curtailment of OPG's nuclear production is also possible. The Hydroelectric Surplus Baseload Generation Variance Account authorized by the OEB helps to mitigate the financial impact of hydroelectric spill due to SBG conditions for OPG's regulated hydroelectric generating stations. At this time, SBG is not expected to affect OPG's nuclear production, and there is currently no similar variance account for the nuclear facilities.

The structure of the Ontario electricity market is subject to regulation and market rules, changes to which may affect OPG's revenue. The Province, the IESO, the OEB, or another entity or regulatory body may change or institute regulations or rules that can impact OPG's capability to generate revenue or ability to recover appropriate costs and earn a return on the assets.

## People and Culture

## OPG's financial position could be affected if skilled human resources are not available or aligned with its operations.

The development of new leaders and retention of staff in critical roles across OPG is a key factor to OPG's success. Another success factor is related to the effective transfer of knowledge from those in critical positions throughout the organization to future leaders. The risk associated with the alignment and/or availability of skilled and experienced resources continues to exist for OPG in specific areas, including leadership and project management positions. To mitigate this risk, OPG continues to focus on succession planning, leadership development and knowledge retention programs to improve the capability of its workforce. There is also a continued risk of a mismatch between attrition levels and the resource requirements to meet OPG's future business needs.

Electricity generation involves complex technologies that require highly skilled and trained workers. Many positions at OPG have significant educational prerequisites and rigorous requirements for continuous training and periodic requalification which requires a long-term outlook to workforce planning.

To mitigate the above risks, OPG has embarked upon an organization-wide workforce planning and resourcing effort and has established ongoing monitoring processes to reassess risks, challenges and opportunities related to staffing on a regular basis. OPG expects to meet the human resource needs of the business by developing existing employees and hiring in specific areas, while continuing to leverage attrition through realignment of work and streamlining of processes, where appropriate.

As of December 31, 2015, approximately 90 percent of OPG's regular labour force was represented by a union. During 2015, OPG reached agreements to renew both the PWU and The Society collective agreements for threeyear terms, expiring March 31, 2018 and December 31, 2018, respectively. In addition, 13 of 19 collective agreements for the craft unions with established bargaining rights on OPG facilities expired on April 30, 2015. Agreements of five-year terms have been completed with all trade unions. As a result of the above agreements, OPG considers the likelihood of a labour disruption in the near future to be significantly reduced.

### Health and Safety

### OPG's operations involve inherent occupational safety risks and hazards.

OPG's operations involve inherent occupational safety risks and hazards that could impact the achievement of the Company's health and safety goals. OPG is committed to continuous improvement and achievement of its ultimate goal of zero injuries through a formal enterprise-wide safety management system, integrated at the operating site level, and by continuing to foster a strong health and safety culture among its employees and contractors. The safety management system serves to focus the Company on proactively managing safety risks and hazard exposures to employees and contractors.

## Corporate Reputation

# OPG is exposed to reputational risk associated with changes in the opinion of various stakeholders regarding its public profile.

As a wholly Province-owned provider of a large portion of Ontario's electricity requirements, maintaining a positive corporate reputation and public trust is critical to OPG's success. OPG focuses on building and maintaining its reputation through various best practices, including appropriate and transparent governance practices, effective and transparent communication with stakeholders, community support, and other corporate citizenship initiatives across the province. Efforts to reinforce OPG's reputation also include various media campaigns highlighting OPG's contribution as a clean power generator with a commitment to safety and community partnerships. In addition, OPG undertakes continuous improvement initiatives in various assurance and risk management activities. Issue management and response plans are developed to address specific reputational considerations as they arise.

## Ownership by the Province

OPG's commitment to maximize the return on the Shareholder's investment in the Company may compete with the obligation of the Shareholder to respond to a broad range of matters in its role as the Government of Ontario.

The Province owns all of OPG's issued and outstanding common shares. Accordingly, the Province determines the composition of OPG's Board of Directors and can directly influence major decisions including those related to project development, timing and strategy of applications for regulated prices, asset divestitures, financing, and capital structure. OPG could be subject to Shareholder direction that requires OPG to undertake activities that result in increased expenditures, or that reduce revenues earnings, or cash flows relative to the business activities or strategies that would have otherwise been undertaken. In addition, OPG's corporate interests and the wider interests of the Province may compete as a result of the obligation of the Province to respond to a broad range of matters affecting OPG's business environment.

## Information Technology

OPG's ability to operate effectively is in part dependent on effectively managing its Information Technology (IT) requirements. IT system failures may have an adverse impact on OPG.

OPG's ability to operate effectively is in part dependent upon developing or subcontracting and managing a complex IT systems infrastructure. Failure to meet IT requirements, effectively deal with cyber security threats, or manage system changes and conversions could result in future system failures, and/or an inability to align IT systems with business needs. In addition, OPG could be exposed to operational risks, reputational damage and/or financial losses in the event of IT security breaches. To mitigate these risks, OPG closely monitors its IT systems as well as changes in the operating environment, and is proactively implementing appropriate safeguards against IT-related risks. In particular, OPG is committed to operating its information technology and industrial control systems in a secure, vigilant, and resilient manner that minimizes cyber risks to the Company's information assets and generation facilities. In 2015, a multi-point cyber security improvement program was progressed to continue improving defenses against evolving threats and to maintain compliance with legal and regulatory requirements.

## **Suppliers**

Non-performance by strategic suppliers or an inability to diversify the supplier base could adversely impact operating and project performance, financial results and reputation of OPG.

OPG's ability to operate effectively is in part dependent upon access to equipment, materials, and service suppliers. Loss of key equipment, materials, and service suppliers, particularly for the nuclear business, could affect OPG's ability to operate effectively and/or to execute major development projects or other capital investment programs. OPG mitigates this risk, to the extent possible, through effective contract negotiations, contract terms, vendor monitoring, and diversification of its supplier base.

### **Business Continuity and Emergency Management**

Natural, technological, or human-caused hazards may impact OPG's business continuity.

OPG is exposed to potential or actual incidents or developments resulting from natural, technological, or humancaused hazards; to significant events against which it is not fully insured or indemnified; or to a party that fails to meet its indemnification obligations.

OPG's business continuity program provides a framework to build resilience into critical business processes by facilitating development of risk response plans and business continuity exercises. OPG's emergency management program ensures that the Company can manage an emergency in a timely and effective manner. OPG's plans and implementation procedures identify immediate response actions to be taken to protect the health and safety of

employees and the public, and to limit the impact of the crisis on site security, production capability, and the environment. The program elements are designed to meet legal and regulatory requirements.

## First Nations and Métis Communities

OPG is exposed to risks associated with its relationships with First Nations and Métis communities. The quality of OPG's relationships and the outcome of negotiations with First Nations and Métis communities may impact OPG's project and financial performance, as well as its corporate reputation.

OPG may be subject to claims by First Nations and Métis communities. These claims stem from projects and generation development related to the operations of OPG and historic operations of OPG's predecessor company, Ontario Hydro, which may have impacted title and rights of First Nations and Métis communities.

OPG has a First Nations and Métis Relations Policy, which sets out the Company's commitment to build and maintain positive relationships with the First Nations and Métis communities. OPG has been successful in resolving a number of past grievances by First Nations. However, the outcome of the ongoing and any future negotiations depends on a number of factors, including legislation and regulations, and precedents created by court rulings, which are subject to change over time. OPG also pursues generation-related developments in partnerships with First Nations and Métis communities on the basis of long-term mutually beneficial commercial arrangements.

## **Environmental Risks**

OPG may be subject to orders or charges if it is not in compliance with applicable environmental laws. Changes in environmental regulatory requirements can result in existing operations being in a state of non-compliance, a potential inability to comply, and potential costs and liabilities for OPG.

Changes to environmental laws could create compliance risks and result in potential liabilities that may be addressed by the installation of control technologies, development of new processes, allowances or offsets, or by constraining electricity production. A failure to comply with applicable environmental laws may result in enforcement actions, including the potential for orders or charges. In addition, some of OPG's activities have the potential to impair natural habitat, damage aquatic or terrestrial plant and wildlife, or cause contamination to land or water that may require remediation. There is also a risk that OPG may incur costs to meet heritage conservation program requirements under the *Ontario Heritage Act*.

Potential regulatory changes being managed as risks by the Company include electricity production constraints and water flow management requirements to protect fish and fish habitat, expanded fish passage requirements, and lower drinking and ground water tritium concentration standards. These changes could impact plant operations and increase costs. OPG continues to monitor and address risks associated with changes to environmental laws and regulatory requirements. There were no significant changes to environmental legislation applicable to OPG during 2015.

OPG recognizes that efforts are required to plan for the effects of climate change and has identified climate change adaptation as a strategic issue for the company. OPG monitors developments in climate science, adaptation activities, and potential changes to policy and regulatory requirements. OPG continues to work with stakeholders to better define adaptation requirements through analysis and understanding of climate change impacts on watersheds and electricity supply and demand. Once adaptation requirements are better known, a risk-based analysis will help OPG determine the extent of efforts it will undertake to reduce the impact of climate change on its operations.

In the second quarter of 2015, the Province announced its intention to implement a cap-and-trade system to GHG emissions. The implementing regulation is expected to be issued in 2016, with the program commencing in 2017. The program is not expected to have a material adverse economic impact on OPG due to the Company's low GHG emitting generating fleet.

# **RELATED PARTY TRANSACTIONS**

Given that the Province owns all of the shares of OPG, related parties include the Province and other entities controlled by the Province including Hydro One, the IESO, and the OEFC, and jointly controlled entities. The transactions between OPG and related parties are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties.

2015 2014 Revenue Revenue (millions of dollars) Expense Expense Hydro One 12 Electricity sales -23 \_ 6 Services 1 13 1 Province of Ontario Decommissioning Fund excess funding 476 185 Used Fuel Fund rate of return guarantee 274 439 Gross revenue charges 121 123 ONFA guarantee fee 8 8 Pension benefits guarantee fee 2 OEFC Gross revenue charges 207 209 Interest expense on long-term notes 177 187 \_ -Income taxes, net of investment tax credits 80 136 Contingency support agreement 8 83 **IESO** 75 Electricity related revenue 4,903 65 4,305 4,924 1,123 4,412 1,668

The related party transactions for the years ended are summarized below:

The receivable and payable balances, as at December 31, between OPG and its related parties are summarized below:

(millions of dollars)	2015	2014
Receivables from related parties		
Hydro One	1	1
IESO	531	468
OEFC	9	10
PEC	3	3
Province of Ontario	1	-
Accounts payable and accrued charges		
Hydro One	1	8
OEFC	51	63
Province of Ontario	20	3
IESO	18	-

# INTERNAL CONTROLS OVER FINANCIAL REPORTING AND DISCLOSURE CONTROLS

Management, including the President and Chief Executive Officer (President and CEO) and the Chief Financial Officer (CFO), are responsible for maintaining Disclosure Controls and Procedures (DC&P) and Internal Controls over Financial Reporting (ICOFR). DC&P is designed to provide reasonable assurance that all relevant information is gathered and reported to senior management, including the President and CEO and the CFO, on a timely basis so that appropriate decisions can be made regarding public disclosure. ICOFR is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the financial statements in accordance with US GAAP.

Effective January 1, 2015, OPG completed the implementation of ESCP, which integrated enterprise systems that support plant operations, purchasing, payments, and time reporting in order to simplify use, increase efficiencies, and streamline business processes across the organization. Changes to OPG's ICOFR resulting from the ESCP implementation have been documented and considered in the evaluation of design effectiveness of ICOFR as of December 31, 2015. There were no other changes in OPG's ICOFR during the year ended December 31, 2015 that have materially affected or are reasonably likely to materially affect OPG's ICOFR.

Management, including the President and CEO and the interim CFO, concluded that, as of December 31, 2015, OPG's DC&P and ICOFR (as defined in National Instrument 52-109 – *Certification of Disclosure in Issuers' Annual and Interim Filings*) were effective.

# FOURTH QUARTER

## **Discussion of Results**

	Three Months Ended December 31	
(millions of dollars) (unaudited)	2015	2014
Revenue	1,312	1,318
Fuel expense	175	177
Gross margin	1,137	1,141
Dperations, maintenance and administration	788	684
Depreciation and amortization	354	208
Accretion on fixed asset removal and nuclear waste management liabilities	223	211
Earnings on nuclear fixed asset removal and nuclear waste management funds	(169)	(176)
Regulatory disallowance related to the Niagara Tunnel project	-	77
ncome from investments subject to significant influence	(9)	(9)
Property taxes	11	10
Restructuring	5	3
(Loss) income before other loss (income), interest, and income taxes	(66)	133
Other loss (income)	12	(5)
Loss) income before interest and income taxes	(78)	138
Net interest expense	44	42
Loss) income before income taxes	(122)	96
ncome tax (recovery) expense	(22)	6
Net (loss) income	(100)	90
	(104)	00
Net (loss) income attributable to the Shareholder	(101)	86
Net income attributable to non-controlling interest	1	4

Net loss attributable to the Shareholder for the fourth quarter was \$101 million, compared to net income of \$86 million for the same quarter in 2014.

Loss before interest and income taxes was \$78 million during the fourth quarter of 2015, a decrease of \$216 million compared to income before interest and income taxes of \$138 million during the same period in 2014. The following summarizes the significant factors which caused the variance:

Significant factors that reduced income before interest and income taxes:

- Increased number of outage days reduced nuclear generation by 3.9 TWh during the fourth quarter in 2015, compared to same period in 2014, partly due to the four-unit Darlington VBO which was completed on October 30, 2015. The reduction in nuclear generation decreased gross margin by approximately \$215 million
- Higher OM&A expenses of \$97 million in the Regulated Nuclear Generation segment primarily due to an increase in outage activities in 2015, including the Darlington VBO.

Significant factors that increased income before interest and income taxes:

- The write-off of \$77 million recorded during the fourth quarter of 2014 as a result of a regulatory disallowance by the OEB related to the Niagara Tunnel project
- Increase in revenue of approximately \$44 million in the Regulated Nuclear Generation and the Regulated – Hydroelectric segments as a result of higher average sales prices due to new base regulated prices authorized by the OEB effective November 1, 2014.

The reduction in income tax expense during the fourth quarter of 2015, compared to the same quarter in 2014, was primarily due to lower income before taxes in 2015.

## **Average Sales Prices**

The average sales price for the Regulated – Nuclear Generation segment during the fourth quarter of 2015 was 7.0 ¢/kWh, compared to 6.0 ¢/kWh during the same quarter in 2014. The average sales price for the Regulated – Hydroelectric segment during the fourth quarter of 2015 was 4.8 ¢/kWh, compared to 3.9 ¢/kWh during the same quarter in 2014. The increase in the average sales prices for OPG's regulated segments during the fourth quarter of 2015 was a result of higher base regulated prices effective November 1, 2014 and new rate riders authorized by the OEB in 2015 for recovery of deferral and variance account balances. The revenue increase associated with the new rate riders during the three months ended December 31, 2015 was largely offset by a corresponding increase in amortization expense related to regulatory balances.

## **Electricity Generation**

OPG's electricity generation for the three months ended December 31, 2015 and 2014 was as follows:

	Three Months Ended December 31	
<u>(</u> <i>TWh</i> )	2015	2014
Regulated – Nuclear Generation Regulated – Hydroelectric	8.8	12.7
Hydroelectric generating stations prescribed for rate regulation prior to 2014	4.8	4.6
Hydroelectric generating stations prescribed for rate regulation effective in 2014 Contracted Generation Portfolio <sup>1</sup>	2.5 0.7	3.0 0.6
Total OPG electricity generation	16.8	20.9
Total electricity generation by all other generators in Ontario <sup>2</sup>	19.6	18.5

<sup>1</sup> Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

<sup>2</sup> Non-OPG generation is calculated as the Ontario electricity demand plus net exports, as published by the IESO, minus OPG electricity generation.

The decrease in OPG's electricity generation of 4.1 TWh during the fourth quarter of 2015, compared to the same quarter in 2014, was primarily due to lower electricity generation from the Regulated – Nuclear Generation segment as a result of an increased number of outage days at the Darlington GS, including the VBO. The decrease in generation was also due to reduced generation from OPG's hydroelectric generating stations prescribed for rate regulation effective in 2014, primarily due to lower water flows in eastern Ontario.

Ontario's electricity demand as reported by the IESO was 32.7 TWh during the fourth quarter of 2015, compared to 34.5 TWh during the fourth quarter of 2014.

## **Liquidity and Capital Resources**

Cash flow provided by operating activities during the three months ended December 31, 2015 was \$111 million, compared to \$440 million for the same period in 2014. The decrease in cash flow was primarily due to lower generation revenue and higher OM&A expenditures during fourth quarter of 2015.

Cash flow used in investing activities during the three months ended December 31, 2015 was \$571 million, compared to \$463 million during the same period in 2014. The increase was primarily due to the investment of proceeds from the 2015 long-term debt issuance in support of the Peter Sutherland Sr. GS project into a structured deposit note. The increase was partly offset by lower expenditures for the Lower Mattagami River project as all new units were declared in service by the end of 2014.

Cash flow provided by financing activities during the three months ended December 31, 2015 was \$356 million, compared to cash flow used in financing activities of \$4 million for the same period in 2014. The increase in cash flow provided by financing activities was due to the long-term debt issuance during the fourth quarter of 2015 in support of the Peter Sutherland Sr. GS project and the net issuance of short-term notes under the LME's commercial paper program.

# **QUARTERLY FINANCIAL HIGHLIGHTS**

The following tables set out selected annual financial information for the last three years and financial information for each of the eight most recently completed quarters. This information is derived from OPG's unaudited interim consolidated financial statements and the audited consolidated financial statements, and has been prepared in accordance with US GAAP.

# **Annual Financial Information**

(millions of dollars – except where noted)	2015	2014	2013
Revenue	5,476	4,963	4,863
Income before extraordinary item attributable to the Shareholder	402	561	135
Net income attributable to the Shareholder	402	804	135
Net income per common share before extraordinary item (dollars)	\$1.57	\$2.19	\$0.53
Net income per common share (dollars)	\$1.57	\$3.14	\$0.53
Total assets	44,302	41,645	38,091
Total long-term liabilities	32,427	30,483	28,652
Common shares outstanding (millions)	256.3	256.3	256.3

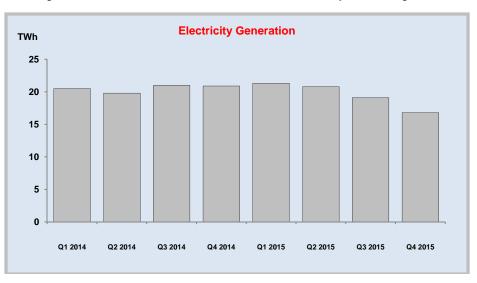
## **Quarterly Financial Information**

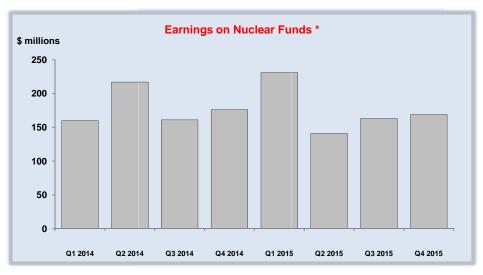
(millions of dollars – except	2015 Quarters Ended				
where noted) (unaudited)	December 31	September 30	June 30	March 31	Total
Revenue	1,312	1,426	1,383	1,355	5,476
Net (loss) income attributable to the Shareholder	(101)	80	189	234	402
Net income attributable to non-controlling interest	1	5	4	5	15
Net (loss) income	(100)	85	193	239	417
Per common share, attributable to the Shareholder <i>(dollars)</i>	(\$0.39)	\$0.31	\$0.74	\$0.91	\$1.57

(millions of dollars – except	2014 Quarters Ended				
where noted) (unaudited)	December 31	September 30	June 30	March 31	Total
Revenue	1,318	1,160	1,098	1,387	4,963
Income before extraordinary item attributable to the Shareholder	86	118	115	242	561
Income before extraordinary item attributable to non- controlling interest	4	1	1	1	7
Income before extraordinary item	90	119	116	243	568
Net income attributable to the Shareholder	86	361	115	242	804
Net income attributable to non-controlling interest	4	1	1	1	7
Net income	90	362	116	243	811
Per common share, attributable to the Shareholder <i>(dollars)</i>					
Income before extraordinary item	\$0.34	\$0.46	\$0.45	\$0.94	\$2.19
Net income	\$0.34	\$1.41	\$0.45	\$0.94	\$3.14

# Trends

OPG's quarterly results are affected by changes in grid-supplied electricity demand primarily resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. Historically, OPG's revenues are higher in the first quarter of a fiscal year as a result of winter heating demands, and in the third quarter due to air conditioning and cooling demands. OPG's financial results are also affected by the earnings on the Nuclear Funds.





\*net of regulatory variance account

Additional items which affected net income (loss) in certain quarters above are described below:

- Higher revenue in each of the quarters of 2015, compared to the same quarters in 2014, resulting from higher average sales prices due to new base regulated prices authorized by the OEB effective November 1, 2014 for all of OPG's regulated facilities. The increase was partially offset by higher expenses in 2015 resulting from lower deferrals in regulatory accounts, compared to 2014, for costs that were not reflected in the regulated prices in effect prior to November 2014
- Higher earnings from the Contracted Generation Portfolio segment in each of the quarters of 2015, compared to the same quarters in 2014, primarily due to the new units of the Lower Mattagami River generating stations that were placed in service throughout 2014, and the conversion to biomass fuels of units at the Atikokan GS and the Thunder Bay GS
- Higher revenue during the first quarter of 2014, compared to the same quarter in 2015, primarily due to higher electricity spot market prices for the production from the 48 hydroelectric facilities prescribed for rate regulation effective in 2014 and higher trading revenue from electricity sold to neighbouring markets, both primarily as result of the unseasonably cold winter.

Additional information about OPG, including its audited consolidated financial statements and notes thereto, can be found on SEDAR at <u>www.sedar.com</u>.

## SUPPLEMENTARY NON-GAAP FINANCIAL MEASURES

In addition to providing net income and other financial information in accordance with US GAAP, certain non-GAAP financial measures are also presented in OPG's MD&A. These non-GAAP measures do not have any standardized meaning prescribed by US GAAP and, therefore, may not be comparable to similar measures presented by other issuers. OPG utilizes these measures to make operating decisions and assess performance. Readers of the MD&A would utilize these measures in assessing the Company's financial performance from ongoing operations. The Company believes that these indicators are important since they provide additional information about OPG's performance, facilitate comparison of results over different periods, and present measures consistent with the Company's strategies to provide value to the Shareholder and to ensure availability of cost effective funding. These non-GAAP financial measures have not been presented as an alternative to net income or other measures in accordance with US GAAP, but as an indicator of operating performance.

The definitions of the non-GAAP financial measures are as follows:

(1) **ROE Excluding AOCI** is defined as net income attributable to the Shareholder divided by average equity attributable to the Shareholder excluding AOCI, for the period. ROE Excluding AOCI is measured over a 12-month period and is calculated as follows for the period ended December 31:

(millions of dollars – except where noted)	2015	2014
ROE Excluding AOCI Net income attributable to the Shareholder Divided by: Average equity attributable to the Shareholder, excluding AOCI	402 10.023	804 9.420
ROE Excluding AOCI (percent)	4.0	8.5

ROE Excluding AOCI is presented below for the period ended December 31 excluding the impact of the extraordinary gain of \$243 million recognized in 2014 related to the 48 hydroelectric stations prescribed for rate regulation effective in 2014.

(millions of dollars – except where noted)	2015	2014
ROE Excluding AOCI, excluding extraordinary gain		
Net income attributable to the Shareholder	402	804
Less: Extraordinary gain	-	243
Net income, excluding extraordinary gain, attributable to the Shareholder	402	561
Divided by: Average equity attributable to the Shareholder, excluding AOCI and extraordinary gain	9,780	9,299
ROE Excluding AOCI, excluding extraordinary gain (percent)	4.1	6.0

(2) **FFO Adjusted Interest Coverage** is defined as FFO before interest divided by adjusted interest expense. FFO before interest is defined as cash flow provided by operating activities adjusted for interest paid, interest capitalized to fixed and intangible assets, and changes to non-cash working capital balances for the period. Adjusted interest expense is calculated as net interest expense plus interest income, interest capitalized to fixed and intangible assets, interest related to regulatory assets and liabilities, and interest on pension and OPEB projected benefit obligations less expected return on pension plan assets, for the period.

**FFO Adjusted Interest Coverage** is measured over a 12-month period and is calculated as follows for the period ended:

(millions of dollars – except where noted)	2015	2014
FFO before interest		
Cash flow provided by operating activities	1,465	1,433
Add: Interest paid	269	273
Less: Interest capitalized to fixed and intangible assets	(102)	(135)
Add: Changes to non-cash working capital balances	100	(212)
FFO before interest	1,732	1,359
Adjusted interest expense		
Net interest expense	180	80
Add: Interest income	9	10
Add: Interest capitalized to fixed and intangible assets	102	135
Add: Interest related to regulatory assets and liabilities	2	75
Add: Interest on pension and OPEB projected benefit obligations	53	179
less expected return on pension plan assets		
Adjusted interset evenese	246	470
Adjusted interest expense	346	479
FFO Adjusted Interest Coverage (times)	5.0	2.8

(3) **Nuclear Total Generating Cost per MWh** is used to measure the cost performance of OPG's nuclear generating assets. Nuclear TGC per MWh is defined as the total of OM&A expenses of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the nuclear electricity generation business), nuclear fuel expense for OPG-operated stations (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs) incurred in the year, divided by OPG's nuclear electricity generation.

(millions of dollars – except where noted)	2015	2014
Nuclear TCC per MM/b		
Nuclear TGC per MWh	2 200	4 000
Regulated – Nuclear Generation OM&A expenses	2,200	1,983
Regulated – Nuclear Generation fuel expense	301	258
Regulated – Nuclear Generation capital expenditures	1,023	991
Less: Darlington Refurbishment capital and non-capital costs	(708)	(702)
Add: Regulated – Nuclear Generation OM&A and fuel expenses deferred in regulatory variance and deferral accounts	230	330
Less: Nuclear fuel expense for non OPG-operated stations	(62)	(59)
Less: Other adjustments	(34)	(19)
	2,950	2,782
Nuclear electricity generation (TWh)	44.5	48.1
Nuclear TGC per MWh (\$/MWh)	66.29	57.84

(4) Gross margin is defined as revenue less fuel expense.

## CORPORATE GOVERNANCE

National Instrument 58-101, *Disclosure of Corporate Governance Practices*, has been implemented by Canadian securities regulatory authorities to provide greater transparency for the marketplace regarding issuers' corporate governance practices. OPG's corporate governance practices align with National Instrument 58-101 and National Policy 58-201, *Corporate Governance Guidelines*. In addition, OPG has reviewed its governance practices against the principles discussed in the 2014 Report on Building High Performance Boards issued by the Canadian Coalition for Good Governance and concluded that OPG compares favourably to those principles that apply to OPG. Information with respect to OPG's Board of Directors (Board) is as follows:

# **Board of Directors**

OPG's Board of Directors is made up of 15 individuals with the following capabilities:

- managing large businesses
- managing and operating nuclear stations
- managing capital intensive companies
- overseeing regulatory, government and public relations
- human resources management
- financial, legal and corporate governance expertise
- knowledge of First Nations and Métis communities
- stakeholder management.

The Board exercises its independent supervision over management as follows: the majority of members of the Board of Directors are independent of the Company; meetings of the Board of Directors are held at least five times a year; a formal Charter for the Board of Directors, and for each Board Committee, has been adopted and the charters are reviewed annually; the Board and each Board Committee is chaired by an independent Director; and a portion of each Board and Committee meeting is reserved for independent Directors to meet without management present.

OPG has a written position description for the Chief Executive Officer (CEO). This position is accountable to the Board of Directors for: ensuring a culture of integrity and ethical conduct; increasing Shareholder value; defining and executing a strategy, including a sustainable business model that will service the long-term power generation needs of the province; and providing a standard of leadership that will achieve operational excellence with respect to matters of safety, stakeholder relationships, financial performance, asset reliability, health, and environmental management and regulatory compliance. In addition, the Board delineates the President and CEO role and responsibilities through the By-laws, the Board Charter, the Board policies, and the corporate and CEO annual goals and objectives. The Board sets and monitors performance against annual CEO and OPG targets and objectives.

## **Director Independence**

On an annual basis, the Compensation, Leadership and Governance Committee reviews the disclosures made by Directors in the annual Director Questionnaire and reviews each disclosed affiliation's relationship with OPG in order to determine whether the Director is (or remains) independent. The Compensation, Leadership and Governance Committee reports on its review to the Board of Directors.

Based on the meaning of Independence in Section 1.4 of National Instrument 52-110 *Audit Committees* (NI 52-110) and a review of the applicable factual circumstances against this standard, the Board's Compensation, Leadership and Governance Committee has determined that all Directors listed are independent, except for Jeffrey Lyash, who is considered to have a material relationship with OPG by virtue of his position as President and CEO of OPG.

The OPG Board has a Board of Directors Conflict of Interest Policy and Procedure that governs the disclosure and mitigation of Director conflicts or potential conflicts of interest and has adopted an annual process of written disclosure by Directors in order to:

- (i) identify potential conflicts of interest for the purposes of complying with the Board of Directors Conflict of Interest Policy and the OBCA;
- (ii) validate their independence and financial literacy for the purposes of complying with securities regulations related to Boards and audit committees; and
- (iii) satisfy other disclosures and filings.

To further minimize potential conflicts of interest, the Board of Directors has a policy on interlocking directorships. The Board's policy on interlocking directorships states that no more than two OPG Directors may sit on a Board of another reporting issuer at the same time. Directors must confirm that they are in compliance with OPG's policy on interlocking directorships when disclosing to the Board Chair appointments to other Boards.

# Strategic Planning

OPG delivers value to Ontario electricity customers and its Shareholder, the Province of Ontario, by reliably and costeffectively producing electricity from its diversified portfolio of clean energy generating assets while operating in a safe, transparent, environmentally responsible and commercially sound manner. OPG also seeks to pursue, on a commercial basis, generation development projects and other business growth opportunities to the benefit of the Shareholder. OPG's key strategic imperatives are discussed under the heading, *Core Business and Strategy* section.

OPG's Board holds an annual strategy session and devotes a significant portion of each regular Board meeting to discussion of strategic matters. Management is responsible for developing the strategy and presenting it to the Board for discussion.

In 2015, the Board received reports on key strategic issues, risks, competitive developments, and corporate opportunities facing the Company. Management ensures that the key strategic elements are incorporated into OPG's annual budget and business plan, which is reviewed and approved by the Board. The Board also periodically receives briefings from external advisors on broad energy industry developments and/or special strategic matters.

## Overseeing the Management of Risk

OPG's Board oversees OPG's approach of identifying, reporting, and mitigating the risks that could significantly impact OPG's capacity to achieve its long-term strategic objectives, as well as specific business plan objectives. To fulfill its risk oversight responsibilities, the Board has established a Corporate Risk Management Policy and an Audit and Risk Committee of the Board, comprised of independent Directors. The Committee's mandate includes oversight of the ERM framework that Management uses to manage OPG's risk profile. The ERM framework assists the Board in understanding how the risks may affect the Company and how they are being addressed by Management. The Audit and Risk Committee receives quarterly reports from OPG's CRO on enterprise-wide risks.

Through the Compensation, Leadership and Governance Committee, the Board also monitors the risks associated with the executive compensation program to preclude the Company's decision-makers from taking excessive risk in order to achieve incentives under the compensation plans. The CRO and the Senior Vice President, People, Culture & Communications jointly review the executive compensation framework on an annual basis to identify any potential for unintended risk-taking. The CRO and the Senior Vice President, People, Culture & Communications provide an annual joint report to the Compensation, Leadership and Governance Committee of the Board on the results of their review.

## Directors

The following tables set forth the name, municipality of residence, position with the Company and principal occupation of each of the Directors of the Company as of March 4, 2016. For discussions regarding the Board Committee structure, including the changes effective February 11, 2016, refer to the heading, *Committees of the Board of Directors*.



Bernard Lord Age: 50

Moncton, New Brunswick, Canada

Bernard Lord was appointed Board Chair for Ontario Power Generation on April 1, 2014. Mr. Lord is President and CEO of the Canadian Wireless Telecommunication Association and the Chairman of the Mobile Giving Foundation Canada. He serves as a corporate director for Médavie Blue Cross.

Mr. Lord earned a bachelor's degree with a major in economics as well as a bachelor's degree in common law from l'Université de Moncton. He has also received honorary doctorate degrees from University of New Brunswick, l'Université de Moncton and Saint Thomas University. He was admitted to the New Brunswick Bar in 1993 and was appointed as Queen's Counsel in 2011.

In 1999, Mr. Lord became one of Canada's youngest Premiers at the age of 33. His majority government was re-elected in 2003 and he served as Premier of New Brunswick until October 2006. He was elected four times as a Member of the New Brunswick Legislative Assembly.

His government introduced several new initiatives to support the development of natural resources while also protecting the environment, including a new energy policy that lead to the restructuring of NB Power and the refurbishment of the Point Lepreau nuclear generating station.

During Mr. Lord's terms as Premier, New Brunswick saw the lowest unemployment rate in 30 years and tax cuts each year, combined with balanced budgets and debt reduction. His government made record investments in health care and education while strengthening local democracy and modernizing the Official Languages Act.

Board/Committee Membership:	2015 Attendance:	
Board (since November 2013)	10 of 10	100%
Ad Hoc Committee (since April 2014)	1 of 1	100%
Executive Talent Committee (since April 2014)	4 of 4	100%
The Board Chair is not a member of any standing Committee. The Board Chair attends all other	24 of 24	100%
Committee meetings.		

Principal Occupation: President and CEO of Canadian Wireless Telecommunications Association

Board Memberships for other Reporting Issuers: None

Independence from OPG: Independent



#### Jeffrey Lyash Age: 54

Toronto, Ontario, Canada

Jeff Lyash is the President and CEO of OPG. Mr. Lyash was formerly the president of CB&I Power where he was responsible for a full range of engineering, procurement and construction of multi-billion dollar electrical generation projects in both domestic and international markets. He also provided operating plant services for nuclear, coal, gas, oil and renewable generation.

Prior to joining CB&I in 2013, Mr. Lyash served as Executive Vice President of Energy Supply for Duke Energy. He led engineering, maintenance and operations of the company's 42,000-megawatt generation fleet, fuel procurement, power trading, major projects and construction, environmental programs, and health and safety programs.

Before the merger of Progress Energy and Duke Energy, Mr. Lyash served as Executive Vice President of Energy Supply for Progress Energy. In this role, he oversaw Progress Energy's diverse 22,000-megawatt fleet of generating resources including nuclear, coal, oil, natural gas and hydroelectric stations. In addition, he was responsible for generating fleet fuel procurement and power trading operations.

Mr. Lyash began his career in the utility industry in 1981, joining Progress Energy in 1993. Before assuming the role of Executive Vice President of Energy Supply, he served as Executive Vice President of Corporate Development, President and Chief Executive Officer of Progress Energy Florida, Senior Vice President of Energy Delivery Florida, and Vice President of Transmission. He also held a wide range of management and executive roles in Progress Energy's nuclear program, including Operations Manager, Engineering Manager, Plant Manager, and Director of Site Operations.

Before joining Progress Energy, Mr. Lyash worked for the U.S. Nuclear Regulatory Commission (NRC) in a number of senior technical and management positions throughout the northeast United States and in Washington, D.C, receiving the NRC Meritorious Service Award in 1987.

Mr. Lyash earned a Bachelor's Degree in Mechanical Engineering from Drexel University, and was honored with the Drexel University Distinguished Alumnus Award in 2009. He has held a Senior Reactor Operator License from the NRC, and is a graduate of the U.S. Office of Personnel Management Executive Training Program and the Duke Fugua School of Business Advanced Management Program.

Board/Committee Membership:	2015 Atten	dance:
Board (since August 2015)	4 of 4	100%
The President and CEO attends all Committee meetings, excluding independent Director in-camera	6 of 6	100%
meetings/sessions.		

Principal Occupation: President & Chief Executive Officer, Ontario Power Generation Inc.

Board Memberships for other Reporting Issuers: None

Independence from OPG: Not Independent



#### Nicole Boivin Age: 57

Toronto, Ontario, Canada

Nicole Boivin is a business executive and director with more than 30 years experience in financial services, public and not for profit enterprises. She brings deep expertise and experience in human resources, branding and communications.

Ms. Boivin is a national board member of Pathways to Education and serves on the human resource committee and is a former provincial appointee to the board of the Harbourfront Centre in Toronto where she was part of the executive committee and chaired the development committee.

Ms. Boivin recently obtained her ICD.D designation from the ICD-Rotman, Directors Education Program.

In her 14 year career at Manulife, Ms. Boivin had progressive leadership roles in human resources, branding, marketing and communications and was a trusted advisor to the senior executives and board of directors of Manulife.

Ms. Boivin was the Chief Branding and Communications officer for Manulife until 2014 and before that, the head of Human Resources for the Canadian Division. Of note, she led the creation of the global cobranding strategy following Manulife's acquisition of John Hancock in the US. Following the financial crisis, she also built and led the global branding and communications function focused on managing reputational risk and rebuilding overall brand presence. As a human resource executive, Ms. Boivin developed and delivered the successful first series of the Global Executive Development Program which has become a core function at Manulife.

Ms. Boivin has deep experience in talent management including succession planning, leadership development, and aligning executive compensation with performance. She also has specific expertise in global brand strategy, corporate social responsibility, reputational management, and issue and crisis management and communications.

Prior to joining Manulife, Ms. Boivin held many roles spanning the public and not for profit sector. In the early 1990's she was the executive director of the Sudbury United Way, followed by her role as the Assistant to the President at Laurentian University and prior to joining Manulife, she was a director at BCE Media/Bell Canada.

Ms. Boivin holds an MBA from Laurentian University and is fluently bilingual in French and English.

Board/Committee Membership:	2015 Attendance:	
Board (since April 2014)	10 of 10	100%
Compensation and Human Resources Committee (since April 2014)	4 of 4	100%
Governance and Nominating Committee (since April 2014)	4 of 4	100%

Principal Occupation: Corporate Director

Board Memberships for other Reporting Issuers: None

Independence from OPG: Independent



#### William Coley Age: 72

Charlotte, North Carolina, U.S.A.

Bill Coley served as Chief Executive of British Energy from 2005 to 2009 when he retired following the successful combination of British Energy and EDF Energy. He was President of Duke Power from 1997 until his retirement in February 2003, holding various officer level positions in engineering, operations and senior management during his 37-year career with the company.

Mr. Coley is a director of Peabody Energy and E.R. Jahna Industries and a member of the International Technical Advisory Committee of Nuclear Electric Insurance Limited. He also served on the WANO Fukushima Commission.

Board/Committee Membership:	2015 Atten	2015 Attendance	
Board (since January 2013)	10 of 10	100%	
Nuclear Oversight Committee (since February 2013)	5 of 5	100%	
Governance and Nominating Committee * (since April 2014)	4 of 4	100%	
Darlington Refurbishment Committee (since May 2015)	2 of 2	100%	
Executive Talent Committee (since April 2014)	4 of 4	100%	
Ad Hoc Committee (since April 2014)	1 of 1	100%	
* Chair of Committee			

\* Chair of Committee

Principal Occupation: Retired Chief Executive of British Energy

Board Memberships for other Reporting Issuers: Peabody Energy

Independence from OPG: Independent



#### Elisabeth (Lisa) DeMarco Age: 48

#### Toronto, Ontario Canada

Lisa DeMarco is a senior partner at DeMarco Allan LLP with over two decades of experience in law, regulation, policy, and advocacy relating to energy and climate change. She represents several governments and leading energy clients in a wide variety of natural gas, electricity and energy storage matters before various regulatory agencies, including the OEB and the National Energy Board. She has been an adjunct professor at Osgoode Hall Law School and lectures regularly.

Ms. DeMarco also assists leading Canadian energy companies on domestic and overseas power project development, renewable power projects, alternative fuel projects, cleantech development and finance, energy storage, carbon capture and storage, corporate social responsibility, environmental disclosure, clean energy finance, and sustainable business strategy.

She is ranked by Chambers Global as one of the world's leading climate change lawyers and regularly attends and advises on related United Nations negotiations. She is ranked and repeatedly recommended by LEXpert, Expert Guide, International Who's Who, and Chambers Canada as a leading energy (oil and gas) and environment lawyer. Ms. DeMarco has worked for multilateral development banks and energy companies on deals and projects in India, Brazil, Sri Lanka, Thailand, Argentina, Chile, Ireland, Africa, Mexico, China, Russia, California, Alberta, Ontario, and Quebec. She plays an ongoing and active role in the development and drafting of energy and greenhouse gas emissions policy, regulation, and law throughout Canada, and in various countries around the world. She was appointed to the Premier of Ontario's now completed Climate Change Advisory Panel and continues to serve as an appointed member of Ontario's Clean Energy Task Force.

Ms. DeMarco is a member of the board of directors of the Ontario Energy Association and a member of the Toronto Atmospheric Fund Investment Committee. She is a graduate of the University of Western Ontario (BSc Hon. – 1990), the University of Toronto (MSc. – 1992), Osgoode Hall Law School, York University (LLB – 1995) and the Vermont Law School (MSEL, summa cum laude – 1995).

Board/Committee Membership:	2015 Attendance	
Board (since April 2014)	10 of 10	100%
Audit and Finance Committee (since April 2014)	5 of 5	100%
Risk Oversight Committee (April 2014 - May 2015)	2 of 2	100%
Nuclear Oversight Committee (since May 2015)	2 of 2	100%

Principal Occupation: Lawyer

Board Memberships for other Reporting Issuers: None

Independence from OPG: Independent



#### Peggy Gilmour Age: 56

Toronto, Ontario, Canada

Peggy Gilmour was previously Senior Vice President, Wholesale and Brokerage Operations at CIBC and has more than 30 years experience in the banking and financial services industry. At CIBC, Ms. Gilmour was responsible for oversight of the global back office functions for CIBC Wholesale Banking and the CIBC Wood Gundy Brokerage Operations. Prior to joining CIBC, Ms. Gilmour was a Managing Director at RBC Capital Markets where she developed and led a global shared services organization that provided governance and control over all trade reconciliation processes worldwide. Ms. Gilmour has extensive experience in corporate finance, enterprise risk management, corporate strategy, and procurement and strategic sourcing.

Ms. Gilmour holds a Bachelor of Commerce degree from the University of Toronto and is a Chartered Professional Accountant. She also has a Certification in Risk Management Assurance and an ICD.D designation from the Institute of Corporate Directors.

Ms. Gilmour currently serves on the Vogogo board of directors, where she is chair of the audit committee. Ms. Gilmour was most recently a director and audit committee chair of the Ontario Pension Board. She has also served on the boards of Interac, Canada's debit card association, as well as the Institute of Internal Auditors.

Board/Committee Membership:
Board (since October 2015)
Audit and Finance Committee (since October 2015)
Risk Oversight Committee (since October 2015)

2015 Attendance:		
2 of 2	100%	
1 of 1	100%	
1 of 1	100%	

Principal Occupation: Chartered Professional Accountant

Board Memberships for other Reporting Issuers: Vogogo Inc.

Independence from OPG: Independent



#### Jean Paul (JP) Gladu Age: 42

Toronto, Ontario, Canada

JP Gladu is currently the President and CEO of the Canadian Council for Aboriginal Business based in Toronto. Anishinaabe from Thunder Bay, Mr. Gladu is a member of Bingwi Neyaashi Anishinaabek located on the eastern shores of Lake Nipigon. Mr. Gladu has over two decades of experience in the natural resource sector including work with Aboriginal communities and organizations, environmental non-government organizations, industry and governments from across Canada. He has produced a number of publications related to Aboriginal issues including: forest certification, Native values collection, biofuel opportunities, First Nation community land use plans, criteria and indicators for sustainable forestry, and cedar product development.

Mr. Gladu holds a Forest Technician Diploma from the Sault College of Applied Arts and Technology, a Bachelor of Science degree in forestry from Northern Arizona University, and an Executive MBA from Queens University in Kingston. In 2014, he was a recipient of the Community Service Award – Transformation Awards from Diversity Magazine. Mr. Gladu was nominated for the 2013 Premier's Award for Outstanding Ontario College Graduates, was recognized as one of five Northern Leaders in 2012 by Northern Ontario Business and was elected Class President of the 2012 Queens Executive Masters of Business Administration.

Mr. Gladu serves on the Colleges and Institutes Canada (previously the Association of Canadian Community Colleges), the Northern Policy Institute, and the Canadian Foundation for Economic Education boards of directors, is an advisory member to the Canadian Association of Petroleum Producers Renewable Clean Energy Committee, and is a committee member of the Provincial Forest Policy Committee. In the past, he has served as a director of the Centre for Research and Innovation in the Bio-Economy, a director of the Papasay Management Corporation, and a board member of the Canadian Bioenergy Association.

Board/Committee Membership:	2015 Attendance:	
Board (since November 2015)	1 of 1	100%
Governance and Nominating Committee (since November 2015)	1 of 1	100%
Risk Oversight Committee (since November 2015)	1 of 1	100%

Principal Occupation: Executive

Board Memberships for other Reporting Issuers: None

Independence from OPG: Independent



#### Brendan Hawley Age: 63

Ottawa, Ontario, Canada

Brendan Hawley is the Principal of Brendan Hawley & Associates – a bilingual consultancy specializing in advocacy communications that focuses on working with clients in both the public and private sectors.

An Ottawa native and honours graduate in history and journalism from St. Patrick's College and Carleton University in Ottawa, Mr. Hawley worked for a decade in the federal government, and then in the private sector prior to establishing his firm in 2000. He held senior positions in communications, marketing, and public affairs at several major public and private sector organizations, including the Canadian Council of Professional Engineers, Export Development Corporation, and the Canadian Petroleum Products Institute.

Mr. Hawley has extensive experience in helping clients identify organizational goals in tandem with operational business plans. He also has significant experience in managing education strategies and programs on matters of Canadian energy. He initiated an Energy Summer School for federal Members of Parliament to facilitate a greater understanding of the economics of energy, and as part of a broader mandate dealing with federal and provincial issues related to energy pricing, facilities, and products. He also authored a popular guide to conducting advocacy at the federal level.

Mr. Hawley has an ICD.D designation from the Institute of Corporate Directors.

Mr. Hawley is affiliated with a number of business and philanthropic organizations but has recently focused more time on Ottawa's Canadian Museum of Nature, Museum of Science and Technology, and the Canadian Museum of History.

Board/Committee Membership:	2015 Attendance	
Board (since April 2014)	9 of 10	90%
Compensation and Human Resources Committee (since April 2014)	4 of 4	100%
Nuclear Oversight Committee (since April 2014)	5 of 5	100%

Principal Occupation: Management Consultant

Board Memberships for other Reporting Issuers: None

Independence from OPG: Independent



#### John Herron Age: 62

Punta Gorda, Florida, U.S.A.

John Herron retired from Entergy where he was the President, CEO and Chief Nuclear Officer of Entergy Nuclear, with responsibility for Entergy's nuclear plants located in New York, Massachusetts, Vermont, Michigan, Louisiana, Mississippi and Arkansas as well as the company's management service to the Cooper Nuclear Station for the state of Nebraska.

He previously served as Entergy's Senior Vice President for Nuclear Operations handling the operational side of fleet management. Mr. Herron joined Entergy in February 2001 as Vice President, Operations at the Waterford 3 Nuclear Station in Killona, Louisiana. He then moved to New York as the Senior Vice President of the Indian Point Energy Center in February 2002.

Mr. Herron began his career in nuclear operations in 1979 at Vermont Yankee Nuclear Power Corporation. His positions there included technical services superintendent, operations manager, technical programs manager, shift supervisor, and supervisory control room operator. In 1994, he moved to Brownville, Nebraska to become plant manager at Nebraska Public Power District's Cooper Nuclear Station.

Mr. Herron then joined the Tennessee Valley Authority as plant manager at Sequoyah Nuclear Plant in Soddy-Daisy, Tennessee, from October 1996 through July 1999. From July 1999 to February 2001, Mr. Herron served as site Vice President at TVA's Browns Ferry Nuclear Plant.

Prior to his career in utilities, Mr. Herron served in the U.S. Navy from 1972 to 1978. He was attached to the USS Tullibee and the S1C NPTU Windsor, where he was an instructor at the Nuclear Submarine Prototype School.

Mr. Herron holds a bachelor's degree in Business Management from Franklin Pierce College in Rindge, New Hampshire. He also attended the Advanced Management Program at the Harvard Business School in May 2005.

Mr. Herron currently serves on the board of directors for Duke Energy. He also served on the board of directors for the Institute of Nuclear Power Operations and on the nuclear strategic issues advisory committee of the Nuclear Energy Institute. In the aftermath of Japan's 2011 earthquake, he was named to the WANO Fukushima Commission and the U.S. nuclear industry's Fukushima response steering committee.

Board/Committee Membership:	2015 Attendance	
Board (since November 2013)	9 of 10	90%
Nuclear Oversight Committee * (since December 2013)	5 of 5	100%
Compensation and Human Resources Committee (since December 2013)	4 of 4	100%
Executive Talent Committee (since April 2014)	4 of 4	100%
Risk Oversight Committee (since August 2014)	4 of 4	100%
Ad Hoc Committee (since November 2014)	1 of 1	100%
Darlington Refurbishment Committee * (since May 2015)	2 of 2	100%
* Chair of Committee		

Principal Occupation: Retired President, Chief Executive Officer and Chief Nuclear Officer, Entergy Nuclear

Board Memberships for other Reporting Issuers: Duke Energy (NYSE)

Independence from OPG: Independent



Ira Kagan Age: 53 Toronto, Ontario, Canada

Ira T. Kagan is a founding partner of Kagan Shastri LLP (Lawyers). He received a B.Sc. degree from the University of Toronto in 1985 and a Juris Doctor from the University of Toronto in 1988. He was called to the Ontario Bar in 1990 and since then has focused on municipal and land use planning law on behalf of both the private (including many of the leading developers in the Greater Toronto Area) and public sector (including conservation authorities, local and regional municipalities).

Mr. Kagan regularly appears before the Ontario Municipal Board and many municipal councils and committees throughout the Greater Toronto Area. His practice includes all aspects of land use planning, including development applications, negotiations and mediations, appeals (both at the Ontario Municipal Board and the courts) and strategic decisions throughout. He is a regular presenter at industry and continuing legal education seminars, and has been involved in many of the leading land use planning cases in the Greater Toronto Area.

In 2005-2006, Kagan Shastri LLP was named the top municipal law firm in the Greater Toronto Area by Nova Res Urbis and since then has consistently ranked in one of the top spots.

Board/Committee Membership:	2015 Attendance	
Board (since April 2014)	10 of 10	100%
Audit and Finance Committee (since April 2014)	5 of 5	100%
Risk Oversight Committee (since April 2014)	4 of 4	100%

Principal Occupation: Lawyer

Board Memberships for other Reporting Issuers: None

Independence from OPG: Independent



M. George Lewis

Age: 55 Toronto, Ontario, Canada

From February 2007 until November 1, 2015, Mr. Lewis was a member of RBC's Group Executive, one of eight executives responsible for setting the overall strategic direction for Royal Bank of Canada, the parent of the RBC companies. In that capacity, he served as Group Head of RBC Wealth Management from 2007 and RBC Insurance from 2012. As Group Head, Wealth Management, Mr. Lewis led the RBC businesses that serve the wealth management needs of affluent clients globally, and units that provide asset management and trust products. He was also Chairman of RBC Global Asset Management Inc. where he continues to serve as a Senior Portfolio Manager.

From July 2000 to May 2008, Mr. Lewis was Chief Executive Officer of RBC Global Asset Management, which under his leadership became Canada's largest single mutual-fund family (RBC Funds) and one of Canada's largest asset management firms. He previously served as Head of Wealth Management for the Canadian Personal and Business segment and, from 2003 to 2006, was Head of all banking and investment products for RBC's Canadian Business.

From 1998 to 2000, Mr. Lewis was Managing Director, Head of Institutional Equity with RBC Capital Markets, responsible for global institutional-equity sales, trading and research. He was previously a toprated equity analyst and Director of Research. He began his career with RBC in 1986, in the investment banking division of RBC Capital Markets.

Mr. Lewis has extensive experience in the investment industry, has a Master of Business Administration degree with distinction from Harvard University and a Bachelor of Commerce degree with high distinction from Trinity College at the University of Toronto. He is also a Chartered Financial Analyst and an FCA/FCPA and has been certified by the Institute of Corporate Directors.

Mr. Lewis serves on the board of directors of the Canadian Film Centre and the Anglican Diocese of Toronto Foundation. He is a current member and past chair of the Bishop's Company of the Anglican Diocese of Toronto, as well as a patron and member of the Cabinet of the United Way of Toronto and York Region. Mr. Lewis also serves as the Honorary Colonel Commandant of the Royal Canadian Chaplain Service of the Canadian Armed Forces.

Board/Committee Membership:	2015 Attendance:	
Board (since February 2005)	10 of 10	100%
Audit and Finance Committee* (since May 2010)	5 of 5	100%
Governance and Nominating Committee (since May 2010)	4 of 4	100%
Ad Hoc Committee (since September 2012)	1 of 1	100%
Executive Talent Committee (since December 2013)	4 of 4	100%
* Chair of Committee		

Principal Occupation: Financial Services Professional

Board Memberships for other Reporting Issuers: None

Independence from OPG: Independent



#### Peggy Mulligan Age: 57

Mississauga, Ontario, Canada

Peggy Mulligan was the Executive Vice President and Chief Financial Officer, Valeant Pharmaceuticals International, Inc. until December 2010. Prior to this, she was a Principal at Priiva Consulting, and before that she served as Executive Vice President and Chief Financial Officer of Linamar Corporation. Prior to Linamar, Mrs. Mulligan was with the Bank of Nova Scotia for eleven years as Executive Vice President, Systems and Operations and Senior Vice President, Audit and Chief Inspector. Before joining Scotiabank, she was an Audit Partner with PricewaterhouseCoopers in Toronto. She holds a B. Math (Honours) from the University of Waterloo and was named a Fellow of the Chartered Professional Accountants of Ontario in 2003.

Board/Committee Membership:	2015 Attendance:	
Board (since December 2005)	9 of 10	90%
Compensation and Human Resources Committee* (since March 2012)	4 of 4	100%
Ad Hoc Committee (since September 2012)	1 of 1	100%
Executive Talent Committee (since December 2013)	4 of 4	100%
Audit and Finance Committee (since April 2014)	4 of 5	80%
Darlington Refurbishment Committee (since May 2015)	2 of 2	100%
* Chair of Committee		

Principal Occupation: Corporate Director

Board Memberships for other Reporting Issuers: Capital Power Corporation, Tuckamore Capital

Independence from OPG: Independent



Yezdi Pavri Age: 66

North York, Ontario, Canada

Yezdi Pavri retired as Vice Chairman of Deloitte Canada in June 2012 after a career of more than 30 years. Prior to being named Vice Chairman, Mr. Pavri was a member of the firm's national Management Committee for over ten years and was the Managing Partner of the Toronto practice since June 2004. He founded Deloitte's national Enterprise Risk Services practice in 1990 and led it for 15 years. He was a founding member of the global firm's India Steering Committee and co-chaired the firm's first Diversity and Inclusion Committee.

Mr. Pavri holds a Bachelor's degree in Aeronautical Engineering from the Indian Institute of Technology in Bombay and a Master's degree in Thermal Power Engineering from Imperial College in London. He is a Fellow of the Chartered Professional Accountants of Ontario.

Mr. Pavri currently serves on the boards of ICICI Bank of Canada, Enterra Holdings Limited (the global parent of Golder Associates) and MD Financial Services, and is a past member of the board of directors of Hydro One. Mr. Pavri is also the immediate past chairman of the board of trustees of United Way Toronto.

Board/Committee Membership:	2015 Attendance:	
Board (since September 2015)	4 of 4	100%
Compensation and Human Resources Committee (since September 2015)	1 of 1	100%
Risk Oversight Committee (since September 2015)	1 of 1	100%

Principal Occupation: Corporate Director

Board Memberships for other Reporting Issuers: None

Independence from OPG: Independent



Gerry Phillips Age: 75

Ajax, Ontario, Canada

Gerry Phillips was the Member of Provincial Parliament in the Legislative Assembly of Ontario for the east Toronto riding of Scarborough-Agincourt from 1987 to 2011. He served in six cabinet portfolios, including twice as Ontario Minister of Energy, where he was OPG's Shareholder from 2007 to 2008 and again on an interim basis from November 2009 to January 2010. He was also the Chair of the Management Board of Cabinet and Minister responsible for Securities Regulation in Ontario.

Before entering public life, Mr. Phillips graduated from the University of Western Ontario's School of Business and worked in the marketing department of Procter and Gamble. In 1970 he joined the consulting firm of Canadian Marketing Associates and became President in 1977. He later founded two successful spin-off companies - the Sales Development Group in 1979 and the Retail Resource Group in 1982. By 1987, he was Chair of all three companies, with a combined workforce of approximately 300.

Mr. Phillips has an Honours B.A. from the Western School of Business.

Board/Committee Membership:	2015 Attendance:	
Board (since January 2013)	10 of 10	100%
Risk Oversight Committee (since February 2013)	4 of 4	100%
Nuclear Oversight Committee (April 2014 – May 2015)	3 of 3	100%
Darlington Refurbishment Committee (since May 2015)	2 of 2	100%

Principal Occupation: Retired

Board Memberships for other Reporting Issuers: None

Independence from OPG: Independent



Jim Reinsch Age: 72

Frederick, Maryland, U.S.A.

Jim Reinsch recently retired from the Bechtel Group where he was Senior Vice President and Partner, and past President of Bechtel Nuclear. In this role, he was responsible for the global profit/loss, customer relations, operations, project management, marketing and business development of Bechtel's three nuclear business segments: nuclear operating plant services, steam generator replacement, and operations of Bechtel's global nuclear activities. During his 40 years with Bechtel, he also presided over Bechtel Canada, and managed large regions in the United States and Asia. He served as the President of the American Nuclear Society, and was a member of the Nuclear Energy Institute as well as a member of their Executive Committee. Mr. Reinsch is also a member of several international nuclear energy organizations, including the WANO and the World Nuclear Association.

Mr. Reinsch holds a Bachelor of Science degree from the University of Maryland.

Mr. Reinsch currently serves on the board of directors for Frederick Memorial Hospital and the Hood College Board of Trustees, and is a past board member of Duke Energy and the Smithsonian National Portrait Gallery. Additionally, he serves on the Emirate Nuclear Energy Corporation's committee on nuclear power which reports to the board of directors, and is a member of the international advisory board of Terrestrial Power.

Board/Committee Membership:	2015 Attendance:	
Board (since August 2015)	5 of 5	100%
Darlington Refurbishment Committee (since August 2015)	2 of 2	100%
Nuclear Oversight Committee (since August 2015)	2 of 2	100%

Principal Occupation: Corporate Director

Board Memberships for other Reporting Issuers: None

Independence from OPG: Independent

All of the Directors of the Company have been engaged for more than five years in their current principal occupations, except as set out below:

Ms. Boivin was Senior Vice President, Human Resources and Communications at Manulife Financial from June 2007 to December 2011 and Chief Branding & Communications Officer from January 2012 to May 2014 at Manulife Financial.

Ms. DeMarco was Partner at Macleod Dixon LLP from March 2002 to January 2012, Partner at Norton Rose Canada LLP from January 2012 to June 2013 and Partner at Norton Rose Fulbright LLP from June 2013 to December 2014.

Mr. Herron was President, CEO and Chief Nuclear Officer at Entergy Corporation from December 2009 to April 2013.

Ms. Gilmour was Managing Director, RBC Capital Markets from November 2010 to July 2013, and SVP Wholesale/Brokerage Operations at CIBC from February 2014 to September 2014.

Mr. Gladu was involved in the business development for Bingwi Neyaashi Anishinaabek Nation from March 2009 to September 2012.

Mr. Lyash was President at CB&I Power from July 2013 to July 2015 and Executive Vice President at Duke Energy from May 2008 to January 2012.

Mr. Pavri was Vice Chairman and Partner at Deloitte LLP from January 2011 to May 2012.

Mr. Phillips was the Minister without portfolio from June 2008 to October 2011, Ontario Minister of Energy and Infrastructure from November 2009 to January 2010, Chair of the Management Board of Cabinet from June 2008 to October 2011, and Chair of the Select Committee on the TMX Transaction from February 2011 to April 2011.

# **Orientation and Continuing Education**

The Compensation, Leadership and Governance Committee is responsible for reviewing and recommending appropriate orientation programs. New Directors are provided relevant documentation relating to OPG's governance practices and policies and to its business. Directors attend plant tours of OPG generating facilities, where they also receive comprehensive introductory briefings from OPG senior executives on OPG's operations and business activities.

The Board supports and sponsors the continuing education of OPG Directors, both in the business of OPG and in their duties as Directors. Annual plant tours of OPG's major facilities, site visits to projects with OPG's First Nations and Métis business partners, and special presentations by internal and external experts are made to the Board or Committees on topical business-related issues or on specific aspects of OPG's operations. In 2015, topics included: strategy, energy industry trends, First Nations relations, nuclear safety culture, reputation management, cyber security, and corporate governance. Directors are provided with articles and publications on current topics of interest. Board members have full access to all Board and Committee materials and records. OPG has developed a Director Governance Handbook which provides Directors with information necessary to fulfill their roles as Directors, including director duties and obligations under the OBCA, and relevant corporate policies and procedures. OPG also sponsors Director attendance at the Institute of Corporate Directors' Director Education Program, or equivalent, and sponsors attendance at the Goizueta Director program for members of Committees with oversight of nuclear operations.

## **Ethical Business Conduct**

The Board has adopted a policy for ethical business behaviour and a Code of Business Conduct. The mandate of the Audit and Risk Committee requires that it receive regular reports through the year on the Code of Business Conduct in order to satisfy itself that appropriate codes of conduct and compliance programs are in place, are being enforced, and remedial action is being taken. The Audit and Risk Committee receives quarterly reports by Management on the Code of Business Conduct (including reports on substantiated cases of fraud) and the

disposition of cases including disciplinary action, as well as an annual report on the Code of Business Conduct and a report on the annual review of the Board policy. A copy of OPG's Code of Business Conduct is available on <u>www.opg.com</u> and has been filed on SEDAR (<u>www.sedar.com</u>). The Audit and Risk Committee has procedures for the receipt, retention and treatment of complaints received pertaining to accounting, internal accounting controls or auditing matters, and the confidential anonymous submission by employees concerning such matters.

# **Nomination of Directors**

The Compensation, Leadership and Governance Committee, which is comprised entirely of independent Directors within the meaning of NI 52-110, is responsible for conducting an annual review of the OPG Board's principles and systems of governance, and oversight of annual Board, Committee, and Director evaluations. The Compensation, Leadership and Governance Committee recommends nominees to the Board. The Board may submit recommended candidates to the Shareholder. Nominations of Directors by the Shareholder may also be considered by the Compensation, Leadership and Governance Committee. When considering a potential candidate, the Compensation, Leadership and Governance Committee considers the qualities, experience, and skills that the Board, as a whole, should have in light of the business opportunities and risks facing OPG. The attributes the Compensation, Leadership and Governance Committee consider in a candidate include integrity, business judgment and experience, diversity, professional expertise, independence from management, financial literacy, and communication skills, as well as sufficient time available to fulfill his or her obligations as a Board member. The Board's policy on diversity is to consider a diverse candidate for every vacancy on the Board. OPG defines diversity to include: women, aboriginal peoples, people with disabilities, and visible minorities. These four enumerated groups mirror the four enumerated groups in the definition of "designated groups" in the federal *Employment Equity Act*.

From time to time, the Compensation, Leadership and Governance Committee may engage outside advisors to assist in identifying potential candidates.

# **Director Tenure/Board Renewal**

The OPG Board Charter guideline for board tenure is 10 to 15 years. When considering board renewal, the Compensation, Leadership and Governance Committee regularly reviews the OPG Board skills profile. The Board maintains an "evergreen list" of potential Board candidates. From time to time, the Committee makes recommendations to add skills to the Board that reflect OPG's business opportunities and risks.

## Cease trade orders, bankruptcies, penalties or sanctions

To the knowledge of OPG, no director or executive officer of OPG, or a shareholder holding a sufficient number of securities of OPG to affect materially the control of OPG (a) is, as at the date of the MD&A, or has been within the 10 years before the date of the MD&A, a director or executive officer of any company (including OPG) that, while that person was acting in that capacity, or within a year of that person ceasing to act in that capacity, became bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or was subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold its assets; or (b) has, within the 10 years before the date of the MD&A, become bankrupt, made a proposal under any legislation relating to bankruptcy, or become subject to or instituted any proceedings, arrangement or compromise with creditors, or become subject to or instituted any proceedings, arrangement or compromise with creditors, or become subject to or instituted any proceedings, arrangement or compromise with creditors, or become subject to or instituted any proceedings, arrangement or compromise with creditors, or had a receiver, receiver manager or trustee appointed to hold the assets of the director, executive officer or shareholder, except for:

 Bernard Lord was a director of AEA Technology from the fall of 2010 until the fall of 2012 when it became insolvent.

## **Representation of Women**

### **Board of Directors**

As noted under the heading, *Nomination of Directors*, the Compensation, Leadership and Governance Committee will consider a diverse candidate for every vacancy on the Board. OPG defines diversity as: women, aboriginal peoples, people with disabilities, and visible minorities. The Board has signed on to the Catalyst Accord, and has set a target for "diverse" representation on the Board of 33 percent. In 2015, four members were added to the Board, three of whom meet the diversity definition. As of the date of the MD&A, six of the 15 members of the Board, 40 percent, meet the diversity definition. Representation of women on the Board is 27 percent as of the date of the MD&A.

## Senior Management

OPG strives to create a workforce that reflects diverse populations of the communities in which it operates. As of December 31, 2015 women filled 17 percent of Corporate Officer roles and 23 percent of senior management (senior managers and above) positions. OPG tracks and monitors diversity succession planning metrics and strives to have a diverse candidates list for senior management positions. A target of 25 percent for representation in senior management roles has been established.

## Compensation

## **Director Compensation**

The OPG Director compensation structure was established in 2005. The Compensation, Leadership and Governance Committee is responsible for monitoring and reviewing the level and nature of compensation of OPG Directors. Pursuant to the recommendations of the 2007 Report of the Agency Review Panel, OPG benchmarks the Board's compensation against the 50<sup>th</sup> percentile of compensation levels for a combined private and public sector comparator group. The last review occurred in May 2012 when the Governance and Nominating Committee benchmarked OPG's Director Compensation against comparable public and private companies and concluded that OPG Director Compensation was at the 38<sup>th</sup> percentile of comparator companies. However, the Committee recommended that no change be made to the compensation of Directors at that time in view of legislative constraints on compensation of OPG Management.

From March 25, 2010 to March 31, 2012, the *Public Sector Compensation Restraint to Protect Public Services Act,* 2010, froze the compensation structures for Members of Provincial Parliament, and non-represented political staff and employees across the Ontario Public Service and Broader Public Sector, including non-represented employees and Directors of OPG. In March 2012, the government introduced Bill 55, the *Strong Action for Ontario Act (Budget Measures),* which included measures to extend controls over executive compensation. This act impacts OPG's executive employees and is in effect until the Province of Ontario ceases to have a budget deficit or an executive compensation framework is approved by the Treasury Board of Ontario under Bill 8, *Public Sector and MPP Accountability and Transparency Act.* Bill 55 applies to the Vice President level and up as well as full-time members of the Board of Directors.

In fiscal 2015, OPG's Director compensation framework provided each Director who was not an employee of OPG with an annual retainer of \$25,000. Directors also received a \$3,000 annual retainer to chair Committees and for each Committee of which they are a member. In 2006, the retainer for the Audit and Finance Committee chair was set at \$8,000 in recognition of increased duties and responsibilities. In 2010, in recognition of the increased duties and responsibilities placed upon the chair of the Compensation and Human Resources Committee, the annual retainer was set at \$5,000.

In addition to the above, Directors are compensated for each meeting that they attend and receive a fee of \$1,500 or \$750, as determined by the Board Chair or respective Committee chair.

In order to retain national and international expertise, non-resident Directors are compensated in U.S. dollars and Directors who travel over certain distances receive a travel fee to cover travel time related to Board and Committee meetings they attend.

Since 2004, the Chair of the Board, in his role as non-executive Chair, receives an all-inclusive annual fee of \$150,000 and is reimbursed for out-of-pocket expenses including travel and other expenses.

## CEO Compensation

The Compensation, Leadership and Governance Committee of the Board consists of six members, all of which are independent of OPG within the meaning of NI 52-110. The Committee oversees, on behalf of the Board, the setting of the CEO's annual goals and objectives and the annual review of CEO performance, and makes recommendations to the Board with respect to CEO compensation. The Compensation, Leadership and Governance Committee may seek input from an independent advisor with regard to monitoring and benchmarking compensation trends.

In August 2015, when the current CEO was appointed, the compensation terms were established based on the benchmarks recommended in the 2007 Report of the Agency Review Panel on Phase 1 of its Review of Ontario's Provincially Owned Electricity Agencies. The CEO compensation adheres to the executive compensation restraint measures outlined in Bill 55.

## **Committees of the Board of Directors**

Effective February 11, 2016, the OPG Board restructured and streamlined its standing Committees from six to four, and appointed Directors to each Committee. The following Committees were the standing Board Committees prior to the restructuring:

- Audit and Finance Committee
- Compensation and Human Resources Committee
- Darlington Refurbishment Committee (established May 2015)
- Governance and Nominating Committee
- Nuclear Oversight Committee
- Risk Oversight Committee

For details, refer to the heading, *Committees of the Board of Directors,* in the Company's MD&A for the year ended December 31, 2014 for a description and membership of the Committees.

The following are the current Board Committees as of March 4, 2016:



## Audit and Risk Committee

This Committee is responsible for the integrity, quality, and transparency of OPG's financial information, the adequacy of the financial reporting process, the systems of internal controls, and OPG's related principles, policies, and procedures which Management has established. The Committee is responsible for the oversight of the Company's regulatory filings, financial statements, MD&A, and press releases, prior to their disclosures to the public, including approval of quarterly financial statements and recommending approval of the annual financial statements

and various other annual disclosures of OPG Inc. to the Board. The Committee is also responsible for the appointment, compensation, and oversight of the external auditor. The Committee provides oversight of OPG's corporate financing strategies including:

- policies related to financial exposure management
- processes for identifying major financial risks
- performance of the OPG Pension Fund, the Used Fuel Fund, and the Decommissioning Fund
- review and approval of the audited financial statements of the Nuclear Funds and the statements of investment policies and procedures for the OPG Pension Fund, the Used Fuel Fund, and the Decommissioning Fund.

The Committee is also responsible for the oversight of risk and associated risk management activities, including the review of Management's assessment of significant risks to achieving OPG's business plan objectives. The Committee is also responsible for ensuring that an effective Code of Business Conduct is in place at OPG and monitors compliance with this code.

As of the date of this MD&A, the Audit and Risk Committee consists of George Lewis (Chair), Elisabeth (Lisa) DeMarco, Peggy Gilmour, Brendan Hawley, Ira Kagan, Yezdi Pavri, and Gerry Phillips.

## Compensation, Leadership and Governance Committee

This Committee provides oversight of OPG's human resources and compensation policies and practices, including CEO objectives and compensation, disclosure on compensation and human resources matters, leadership talent review, succession planning, and labour negotiations. The Committee also provides oversight of the design of OPG's benefit and pension plans.

The Committee also oversees the Board's governance program and practices that are consistent with high standards of corporate governance, including annually reviewing and assessing the Board's system of corporate governance with a view to maintaining these high standards. The Committee is also responsible for overseeing OPG's reputation management plan. The Committee identifies and recommends to the Board candidates for nomination to the Shareholder. Finally, the Committee oversees OPG's processes for Board, Committee, and Director assessments, as well as Director compensation and new Director orientation.

As of the date hereof, the Compensation, Leadership and Governance Committee consists of Peggy Mulligan (Chair), Nicole Boivin, Bill Coley, JP Gladu, George Lewis and Yezdi Pavri.

## Darlington Refurbishment Committee

The Darlington Refurbishment Committee is responsible for the oversight of the execution of the Darlington Refurbishment project. The Committee is responsible for retaining external independent oversight advisors, and for making a recommendation to the Board of a final budget and schedule for the Darlington Refurbishment project, which was approved by the Board of Directors in November 2015. The Committee will monitor and report on the progress of the refurbishment project against the approved budget and schedule. The Committee will also make a recommendation to the Board with respect to refurbishment of subsequent units, and other recommendations for approvals related to the refurbishment project as may be required from time to time.

As of the date hereof, the Darlington Refurbishment Committee consists of Jim Reinsch (Chair), Nicole Boivin, Bill Coley, Brendan Hawley, John Herron, Peggy Mulligan and Gerry Phillips.

## Generation Oversight Committee

This Committee is responsible for the oversight of safe, secure and efficient operations of OPG's generating facilities. Additionally, the Committee is responsible for the development, risk management, financing, and execution of major generation projects. The Committee is also responsible for the oversight of OPG's environment and dam safety management systems and OPG's First Nation and Métis relations. The Committee review reports of external advisors/assessors of OPG's generation operations and Management's response and implementation of the results and major findings from such internal and external assessments. The Committee ensures that OPG's generating facilities are in compliance with nuclear safety, industrial and occupational health and safety, and environmental laws and regulations.

As of the date hereof, the Generation Oversight Committee consists of John Herron (Chair), Bill Coley, Elisabeth (Lisa) DeMarco, Peggy Gilmour, JP Gladu, Ira Kagan and Jim Reinsch.

## Assessments

The Compensation, Leadership and Governance Committee is responsible for the annual process for evaluating the performance of the Board, its Committees, and its individual Directors. The Board and Committee evaluations are based upon the completion of confidential questionnaires regarding assessment of performance and compliance with the Board and Committee Charters. Director evaluations are based on self-assessment questionnaires, which are submitted in confidence to the Board Chair and the Chair of the Compensation, Leadership and Governance Committee. In addition, the process includes a follow-up one-on-one meeting between each Director and the Board Chair. The Compensation, Leadership and Governance Committee reports the results of the evaluations and makes recommendations to the Board for enhancing the Board's governance and effectiveness.

## **Further Information on OPG Governance**

OPG provides additional information on OPG's governance on its website (www.opg.com) including:

- Memorandum of Agreement with the Shareholder
- Shareholder Directives
- List of Corporate Officers
- Board and Committee Charters
- Board and Committee Chair Position Descriptions
- Board of Directors Conflict of Interest Policy
- First Nation and Métis Relations Policy
- Code of Business Conduct
- Disclosure Policy
- Environmental Policy
- Employee Health and Safety Policy
- Nuclear Safety Policy
- Safe Operations Policy
- Cyber Security Policy

# AUDIT AND RISK COMMITTEE INFORMATION

NI 52-110 has been implemented by Canadian securities regulatory authorities to encourage reporting issuers to establish and maintain strong, effective, and independent audit committees, to enhance the quality of financial disclosure, and to foster increased investor confidence in Canada's capital markets. Information on OPG's Audit and Risk Committee, including the Audit and Risk Committee Charter, is as follows:

## Audit and Risk Committee Charter

## Purpose

The function and purpose of the Audit and Risk Committee is to assist the Board of Directors in their responsibility for oversight of matters relating to:

- The integrity of OPG's financial statements and reporting
- The integrity and adequacy of internal controls and standards of Codes of Conduct and ethics
- The performance of OPG's internal audit function
- The performance and independence of OPG's external auditors
- Business and financial planning
- The performance of OPG's pension, nuclear decommissioning, and used fuel investment funds
- OPG's Enterprise Risk Management
- · Assessment of committee performance and board policies.

Management is responsible for the preparation, presentation and integrity of OPG's interim and annual financial statements and related disclosure documents. Management is responsible for maintaining appropriate accounting and financial reporting principles and policies and systems of internal and disclosure controls and procedures to comply with accounting standards and applicable laws and regulations which provide reasonable assurance that the assets of the Company are safeguarded and transactions are authorized, executed, recorded and properly reported.

Management is also responsible for the identification, assessment, monitoring, and management of the risks to achieving OPG's strategic and business plan objectives and the development and implementation of policies and procedures to respond to such risks.

The Committee's role is to provide oversight that ensures the Company's assets are protected and safeguarded within reasonable business limits and report such to the Board.

### Committee Responsibilities and Duties

The Committee shall perform the duties set out in this Charter and shall perform such other duties as may be necessary or appropriate under applicable law or securities rules, or as may be delegated to the Committee by the Board from time to time.

### 1. The integrity of OPG's financial statements and reporting

The Committee reviews and makes recommendations to the Board with respect to:

- a) appointment or replacement of the Chief Financial Officer.
- b) OPG's annual financial statements and external audit report, including financial statements, Management's Discussion and Analysis (MD&A), related footnotes and any documentation required by the Securities Act to be prepared and filed by OPG or that OPG otherwise files with the Ontario Securities Commission.
- c) OPG's Annual Information Form, if required, prior to filing with securities regulators.

The Committee reviews and approves:

d) OPG's quarterly financial statements and interim financial information and disclosures in the MD&A and earnings press release, prior to filing.

In carrying out its responsibilities for oversight of the integrity of OPG's financial statements and reporting the Committee will include in its review:

- e) Adequacy of procedures in place for the review of OPG's public disclosure of financial information extracted or derived from OPG's financial statements.
- f) significant accounting principles and reporting issues and impact on the financial statements, including complex or unusual transactions, highly judgmental areas, major issues regarding or changes to OPG's selection/application of accounting principles, financial presentations, the effect of regulatory and accounting initiatives, as well as off-balance sheet arrangements on OPG's financial statements.
- g) analysis prepared by Management and/or the external auditor detailing financial reporting issues and judgments made in connection with the preparation of financial information, including analysis of the effects of alternative generally accepted accounting principles methods.
- whether any other matters related to conduct have come to the Committee's attention that causes it to believe that the financial statements contain an untrue statement of material fact or omit to state a necessary material fact.
- 2. Integrity and adequacy of Internal Controls and standards of Codes of Conduct and ethics

In carrying out its responsibilities for the integrity and adequacy of internal controls, including compliance with legal and regulatory requirements and standards of codes of conduct and ethics, the Committee reviews:

- a) legal, tax, or regulatory matters that may have a material impact on OPG's operations and the financial statements, including, but not limited to, violations of securities law or breaches of fiduciary duty.
- b) the scope of review of internal control over financial reporting, significant findings, recommendations and Management's responses for implementation of actions to correct weaknesses in internal controls.
- c) disclosures made by the Chief Executive Officer and Chief Financial Officer during the certification process regarding significant deficiencies in the design or operation of internal controls or any fraud that involves Management or other employees who have a significant role in OPG's internal controls.
- d) procedures for the receipt, recording and treatment of complaints received by OPG regarding accounting, internal accounting controls, or auditing matters, and procedures for the confidential and anonymous submission by OPG employees of concerns regarding accounting or auditing matters.
- e) expenses of the Board Chair, Board of Directors, President/CEO and the President/CEO's direct reports on an annual basis, and of any other senior officers and employees the Committee considers appropriate.
- f) reports from the Chief Audit Executive and the Chief Ethics Officer on independent reviews and investigations of fraud allegations, matters that may involve fraud and/or Codes of Conduct violations and compliance.
- 3. Performance of OPG's internal audit function

The Committee reviews and makes recommendations to the Board with respect to:

a) Appointment or replacement of the Chief Audit Executive.

The Committee reviews and approves:

- b) The annual internal audit plan and all major changes to the plan, including the organizational structure, budget and the adequacy of resources.
- c) the charter of the internal audit function annually.

In carrying out its responsibilities for the performance of OPG's internal audit function the Committee reviews:

- results of Internal audit reports, including: significant findings, the adequacy of the control processes, Management's response and the timetable for implementation of Management actions to correct weaknesses, any difficulties encountered in the course of their work (such as restrictions on the scope of their work or access to information).
- e) Internal Audit's confirmation of organizational independence and disclosure of any conflict of interest.
- f) Internal Audit performance relative to the annual internal audit plan.

## 4. Performance and Independence of External Auditor

The Committee reviews and makes recommendations to the Board with respect to:

 a) the external auditor to be appointed on behalf of the Shareholder, and related compensation, including results of a cyclical performance review, and a comprehensive review of the external audit firm at least once every five years.

The Committee reviews and approves:

b) pre-approval of all services provided by the external auditors. The Committee may delegate such preapproval authority to the Committee Chair up to a limit of \$250,000. Any decisions of the Committee Chair to whom pre-approval authority is delegated must be presented to the full Audit and Risk Committee at its next scheduled meeting.

In carrying out its responsibilities for the performance and independence of OPG's external audit function the Committee reviews:

- c) the work and report of the external auditor engaged for the purpose of preparing or issuing an auditor's report or performing other audit, review or attest services for OPG, including the resolution of disagreements between Management and the external auditor regarding financial reporting.
- d) the independence and qualifications of the external auditor.
- e) the annual report by the external auditor describing the auditing firm's internal quality control procedures, any material issues raised by the most recent internal quality-control review or peer review of the auditing firm or by any inquiry or investigation by governmental or professional authorities within the preceding five years respecting one or more independent audits carried out by the external auditor and any steps taken to deal with any such issues and all relationships between the external auditors and OPG.
- f) scope and approach of the annual audit plan with the external auditors.
- g) quality and acceptability of OPG's accounting principles including all critical accounting policies and practices used, any alternative treatments that have been discussed with Management as well as any other material communications with Management.
- h) external auditor's process for identifying and responding to key audit and internal control risks.
- i) rotation of the lead audit partner and other audit partners every seven years, and consider regular rotation of the audit firm.
- j) all related-party transactions.
- k) OPG's hiring policies regarding partners, employees and former partners and employees of the present and former external auditor of OPG.
- 5. Business and Financial Planning

The Committee reviews and makes recommendations to the Board on:

a) OPG's business plan, including overall financing plan in support of the Company's capital expenditures and medium – long term forecast.

- b) OPG's rate applications to the Ontario Energy Board, including proposed payment amounts and any agreement arising from a Settlement Conference with intervenors.
- c) corporate financing vehicles, credit facilities, including any plans to access capital debt markets and other related financing activities. The Board may delegate to an officer of the company authority to enter into such financing activities in such a manner as the Board shall determine at the time of such delegation. Any decisions of the officer to whom authority is delegated must be presented to the full Audit and Risk Committee at its next scheduled meeting.
- 6. Pension, Nuclear Decommissioning and Used Fuel Investment Funds

The Committee reviews and makes recommendations to the Board on:

- a) the appointment or replacement of the Chief Investment Officer.
- b) The appointment of the auditor for the OPG Pension Fund and the Used Fuel Segregated Fund and Decommissioning Segregated Fund.
- c) The broad objectives, governance frameworks and risk posture for the OPG Pension Fund and the Used Fuel Segregated Fund and Decommissioning Segregated Fund and annual status report on these Funds.
- d) The tri-ennial valuation of the Pension Fund and annual valuation of the Supplementary Employee Retirement Pension Plans. (*The Committee provides advice to the Compensation, Leadership and Governance Committee on the affordability of proposed pension benefit changes.*)

The Committee reviews and approves:

- e) the appointment of the members of OPG's Pension Committee. In addition, the Committee may, at any time, remove or replace any member of the Pension Committee or fill a vacancy on the Pension Committee. The Pension Committee Chair may temporarily appoint a senior management employee to fill a vacancy on the Pension Committee until the next regularly scheduled Audit and Risk Committee meeting.
- f) the annual audited financial statements for the OPG Pension Fund, the Used Fuel Segregated Fund and the Decommissioning Segregated Fund.
- g) the investment policies and procedures, including the design of modifications, for the OPG Pension Fund, as required by the Ontario Pension Benefits Act and its regulations, and for the Decommissioning Segregated Funds, as required by the Ontario Nuclear Funds Agreement.
- h) the appointment of the Pension Plan actuary.

In carrying out its responsibilities for the oversight of financial planning and investment funds the Committee reviews:

- reports on a quarterly, annual or by exception basis, on compliance with and appropriateness of the asset mix policy; total fund and asset class returns relative to benchmarks; material compliance with breaches of policies or procedures; and work conducted by the plan actuary.
- j) periodic reports on the calculation of OPG's nuclear waste liability.
- 7. OPG's Enterprise Risk Management

The Committee reviews and makes recommendations to the Board on:

- a) the appointment or replacement of the Chief Risk Officer.
- b) the Company's enterprise risk policy, framework, overall risk appetite and targets.

In carrying out its responsibilities for oversight of OPG's Enterprise Risk Management the Committee reviews:

c) the processes employed by Management for identifying and assessing the Company's principal risks.

- d) quarterly reports on Management's assessment of the principal risks to achieving the Company's strategic and business plan objectives, and the strategies for monitoring, managing and responding to those risks.
- e) periodic reports on significant emerging and evolving risks and relevant external events that could potentially impact OPG's risk profile.
- f) compliance metrics related to OPG's commercial operations trading, treasury, and fuels management.
- g) regular reports on OPG's cyber security position and programs.
- h) periodic reports on OPG's Insurance Program.

## 8. Assessment of committee performance and board policies

In carrying out its responsibilities for assessment of committee performance and board policies the Committee shall:

- a) Review and assess Committee performance, including a review of the adequacy of and its compliance with this Charter, in accordance with the evaluation process approved by the Board and taking into account all legislative and regulatory requirements applicable to the Committee as well as any best practice guidelines recommended by regulators with whom OPG has a reporting relationship.
- b) Provide oversight of the implementation of the following Board of Directors' policies, as well as the development of any new policies deemed necessary by the Committee, and reviewing these policies annually to ensure their continuing adequacy:
  - i. Delegation and Exercise of Authority Policy
  - ii. Disclosure Policy
  - iii. Code of Business Conduct and Supplier Code of Conduct
  - iv. Corporate Risk Management Policy
  - v. Cyber Security Policy

## Organization

## Members

The Audit and Risk Committee shall consist of three or more Directors as determined by the Board of Directors. All members of the Committee shall be independent as defined by the Ontario Securities Commission, and not "affiliated" with OPG.

The Board shall appoint the members of the Committee and the Chair of the Committee annually. The Board may appoint a member to fill a vacancy which occurs in the Committee between annual elections of Directors. Any member of the Committee may be removed or replaced at any time by the Board.

If a member of the Committee becomes "affiliated" with OPG, the member may continue as a member of the Committee with the approval of the Board Chair, in consultation with the Corporate Secretary.

As a "venture issuer", OPG is exempt from the statutory requirements of National Instrument 52-110 requiring members of Audit Committees be independent and financially literate. However, OPG considers such independence and financial literacy to be "best practice" and therefore each of the members of the Audit and Risk Committee shall satisfy the applicable independence and financial literacy requirements of the laws and regulations governing Audit Committees.

The Board of Directors shall confirm that each member of the Audit and Risk Committee is financially literate; as such qualification is interpreted by the Board of Directors in its business judgment, and in compliance with National Instrument 52-110 and its Companion Policy.

## Meetings

The Committee shall meet as frequently as it determines but not less than quarterly. During quarterly meetings, the Committee will hold separate in camera sessions with the external auditors, the Chief Internal Audit Executive, the Chief Risk Officer and Management to discuss any matters that the Committee believes should be discussed and to provide a forum for any relevant issues to be raised.

Notice of the time and place of each meeting of the Committee must be given to each member of the Committee not less than 48 hours before the time of the meeting.

A quorum of the Committee shall be a majority of its members, but not less than two. The powers of the Committee may be exercised at a meeting at which a quorum of the Committee is present in person or by telephone or other electronic means, or by a resolution signed by all members entitled to vote on that resolution at a meeting of the Committee. Each member is entitled to one vote in Committee proceedings.

The Chair shall preside at all meetings of the Committee at which he or she is present (or if not able to be present designate another member of the Committee to chair the meeting) and shall develop the agenda for each Committee meeting. The agenda for each meeting of the committee shall be delivered to each member of the Committee at least 48 hours prior to any meeting of the Committee, together with such other materials as the chair determines necessary.

Minutes shall be kept of all meetings of the Committee and shall be maintained by OPG's Corporate Secretary. The procedure at meetings is to be determined by the Committee unless otherwise determined by the by-laws of OPG, by a resolution of the Board or by this Charter.

The Committee may meet in camera (without management present) at any time during the-meeting consistent with the Board guideline on the conduct of in camera sessions and the keeping of minutes from in camera sessions.

The Committee may invite any Director, officer or employee of OPG or OPG's counsel or any other person to attend meetings of the Committee to assist in the discussion and examination of the matters under consideration by the Committee.

## Reports

The Committee will report its activities and actions to the Board of Directors with recommendations, as the Committee deems appropriate.

The Committee will provide for inclusion in OPG's financial information or regulatory filings any report from the Audit and Risk Committee required by applicable laws and regulations and stating among other things whether the Committee has:

- (i) Reviewed and discussed the audited financial statements with Management.
- (ii) Discussed pertinent matters with the internal and external auditors.
- (iii) Received disclosures from the external auditors regarding the auditors' independence and discussed with the auditors their independence.
- (iv) Recommended to the Board of Directors that the audited financial statements be included in OPG's Annual Report.

## Authority

The Audit and Risk Committee shall have the authority to:

- a) conduct or authorize investigations into any matters within the Committee's scope of responsibilities.
- b) set and pay the compensation for any advisors employed by the Committee.

c) to communicate directly with the internal and external auditors.

While the Audit and Risk Committee has the responsibilities and powers set forth in this Charter, it is not the duty of the Audit and Risk Committee to plan or conduct audits or risk assessments, or to determine that OPG's financial statements and disclosures are complete and accurate and are in accordance with generally accepted accounting principles and applicable rules and regulations. These are the responsibility of Management and, as appropriate, the external auditor.

## Delegation of Authority

The Committee may not delegate its oversight responsibilities. The Committee may delegate to a sub-committee, the Chief Executive Officer or any employee of OPG the authority to exercise any right, power or responsibility that the Committee may have on such terms and conditions and within such limits as the Committee deems appropriate provided that the sub-committee, Chief Executive Officer or employee subsequently advises the Committee of any right, power or responsibility so exercised.

#### Access to Management and Outside Advisors

The Audit and Risk Committee shall have unrestricted access to members of Management and relevant information.

The Audit and Risk Committee has the authority to retain legal counsel, accountants or other advisors to assist it in the conduct of any investigation, as it determines necessary to carry out its duties.

### **Composition of the Audit and Risk Committee**

As at March 4, 2016, the members of the Audit and Risk Committee were George Lewis (Chair), Elisabeth (Lisa) DeMarco, Peggy Gilmour, Brendan Hawley, Ira Kagan, Yezdi Pavri and Gerry Phillips. All members are independent with experience in business and financial matters. Each member has an understanding of internal controls and procedures for financial reporting. As part of OPG's Continuing Education Program for Directors, Audit and Risk Committee members are provided with access to both internal and external educational resources, including seminars and courses, in order to maintain or enhance their financial literacy.

## Activities of the Audit and Finance Committee in 2015

The Chartered Professional Accountants of Canada (CPA Canada) and the Canadian Public Accountability Board have recommended that audit committees perform a comprehensive review of the external audit firm at least once every five years. CPA Canada issued guidelines in early 2014 to help audit committees implement these recommendations. The Audit and Finance Committee conducted its first comprehensive review of the Company's external auditor, Ernst & Young (E&Y) in 2014, for the period from 2009 to 2013, using the guidelines and format recommended by CPA Canada. E&Y has been OPG's external auditor since OPG's inception in 1999. E&Y provides audit and audit related services to OPG, including the audit of OPG's annual consolidated financial statements, reviews of OPG's quarterly financial statements as well as audits of the financial statements of OPG's consolidated subsidiaries and other financial information.

In conducting the 2015 annual review of E&Y, the Committee considered input from management, E&Y, and OPG's internal audit function. The Committee performed this review taking into consideration the information submitted by these parties, as well as their individual experiences, to evaluate the auditor's performance. The result of the 2015 annual review was discussed during the August 2015 Audit and Finance Committee meeting. During the review, the Committee considered factors such as the auditors' independence, engagement team quality including the Committee's involvement in the selection of E&Y's lead engagement partner, and communication effectiveness between E&Y and the Company. Upon completion of the review, the Committee was satisfied with the performance of E&Y and concluded that their reappointment was in the best interest of OPG. Therefore, the Committee recommended in November 2015 that the Board of Directors reappoint E&Y as the Company's auditors for the 2016 fiscal year.

## **External Auditor Service Fees**

The following Ernst & Young LLP fees were incurred by OPG:

(thousands of dollars)	2015	2014
Audit fees	1,967	2,259
Audit-related fees	615	205
All other fees <sup>1</sup>	30	15
Comprised of fees related to the subscription of an online accounting research tool and the	raining.	
For further information, please contact: Investor Relations		416-592-6700
		1-866-592-6700
	investor.rela	tions@opg.com
Media Relations		416-592-4008
		1-877-592-4008

www.opg.com

www.sedar.com

Filed: 2016-05-27 EB-2016-0152 Exhibit A2-1-1 Attachment 3 Page 110 of 173

# ONTARIO POWER GENERATION INC. CONSOLIDATED FINANCIAL STATEMENTS DECEMBER 31, 2015



## STATEMENT OF MANAGEMENT'S RESPONSIBILITY FOR FINANCIAL INFORMATION

Ontario Power Generation Inc.'s (OPG) management is responsible for the presentation and preparation of the annual consolidated financial statements and Management's Discussion and Analysis (MD&A).

The consolidated financial statements have been prepared in accordance with United States generally accepted accounting principles (US GAAP) and the rules and regulations of the United States Securities and Exchange Commission for annual financial statements. The MD&A has been prepared in accordance with the requirements of securities regulators, including National Instrument 51-102 of the Canadian Securities Administrators and its related published requirements.

The consolidated financial statements and information in the MD&A necessarily include amounts based on informed judgments and estimates of the expected effects of current events and transactions with appropriate consideration to materiality. Something is considered material if it is reasonably expected to have a significant impact on the Company's earnings, cash flow, value of an asset or liability, or reputation. In addition, in preparing the financial information, we must interpret the requirements described above, make determinations as to the relevancy of information to be included, and make estimates and assumptions that affect the reported information. The MD&A also includes information regarding the impact of current transactions and events, sources of liquidity and capital resources, operating trends, and risks and uncertainties. Actual results in the future may differ materially from our present assessment of this information because future events and circumstances may not occur as expected.

In meeting our responsibility for the reliability of the financial information, we maintain and rely on a comprehensive system of internal controls and internal audits, including organizational and procedural controls and internal controls over financial reporting. Our system of internal controls includes: written communication of our policies and procedures governing corporate conduct and risk management; comprehensive business planning; effective segregation of duties; delegation of authority and personal accountability; careful selection and training of personnel; and accounting policies, which we regularly update. This structure ensures appropriate internal controls over transactions, assets and records. We also regularly test internal controls. These controls and testing are designed to provide us with reasonable assurance that the financial records are reliable for preparing financial statements and other financial information, assets are safeguarded against unauthorized use or disposition, liabilities are recognized, and we are in compliance with all regulatory requirements.

Management, including the President and Chief Executive Officer (CEO) and the Chief Financial Officer (CFO), is responsible for maintaining disclosure controls and procedures (DC&P) and internal controls over financial reporting (ICOFR). DC&P is designed to provide reasonable assurance that all relevant information is gathered and reported to senior management, including the President and CEO and the CFO, on a timely basis so that appropriate decisions can be made regarding public disclosure. ICOFR is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the consolidated financial statements in accordance with US GAAP.

An evaluation of the effectiveness of the design and operation of OPG's DC&P and ICOFR was conducted as of December 31, 2015. Accordingly, we, as OPG's President and CEO and CFO, will certify OPG's annual disclosure documents filed with the Ontario Securities Commission, which includes attesting to the design and effectiveness of OPG's DC&P and ICOFR.

The Board of Directors, based on recommendations from its Audit and Risk Committee, reviews and approves the consolidated financial statements and the MD&A, and oversees management's responsibilities for the presentation and preparation of financial information, maintenance of appropriate internal controls, management and control of major areas of financial risk, and assessment of significant and related party transactions.

The consolidated financial statements have been audited by Ernst & Young LLP, independent external auditors appointed by the Board of Directors. The Independent Auditors' Report outlines the auditors' responsibilities and the scope of their examination and their opinion on OPG's consolidated financial statements. The independent external auditors, as confirmed by the Audit and Risk Committee, had direct and full access to the Audit and Risk Committee, with and without the presence of management, to discuss their audit and their findings therefrom, as to the integrity of OPG's financial reporting and the effectiveness of the system of internal controls.

Jeff Lyash (signed) President and Chief Executive Officer **Carlo Crozzoli (signed)** Interim Senior Vice President, Finance, Strategy, Risk and Chief Financial Officer

March 4, 2016

## INDEPENDENT AUDITORS' REPORT

## To the Shareholder of Ontario Power Generation Inc.

We have audited the accompanying consolidated financial statements of Ontario Power Generation Inc., which comprise the consolidated balance sheets as at December 31, 2015 and 2014, and the consolidated statements of income, comprehensive income, cash flows, and changes in shareholder's equity for the years then ended, and a summary of significant accounting policies and other explanatory information.

## Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with United States generally accepted accounting principles, and for such internal controls as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

## Auditors' Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditors consider internal controls relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal controls. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained in our audits is sufficient and appropriate to provide a basis for our audit opinion.

## Opinion

In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of Ontario Power Generation Inc. as at December 31, 2015 and 2014 and the results of its operations and its cash flows for the years then ended in accordance with United States generally accepted accounting principles.

Toronto, Canada March 4, 2016 Ernst & Young LLP (signed) Chartered Professional Accountants, Licensed Public Accountants

## **CONSOLIDATED STATEMENTS OF INCOME**

Years Ended December 31 (millions of dollars except where noted)	2015	2014
Revenue (Note 16)	5,476	4,963
Fuel expense (Note 16) Gross margin (Note 16)	687 4,789	641 4,322
Expenses (Note 16) Operations, maintenance and administration	2,783	2,615
Depreciation and amortization (Note 4)	1,100	754
Accretion on fixed asset removal and nuclear waste management liabilities (Note 8)	895	797
Earnings on nuclear fixed asset removal and nuclear waste management funds (Note 8)	(704)	(714)
Regulatory disallowance related to the Niagara Tunnel project (Note 3)	-	77
Income from investments subject to significant influence	(39)	(41)
Property taxes Restructuring	45 6	32 18
Nestituciumig	4,086	3,538
Income before other loss (income), interest, income taxes, and	703	784
extraordinary item Other loss (income) <i>(Note 16)</i>	14	(3)
	14	(3)
Income before interest, income taxes, and extraordinary item Net interest expense (Note 7)	689 180	787 80
Income before income taxes and extraordinary item Income tax expense (Note 9)	509 92	707 139
Income before extraordinary item Extraordinary item <sup>1</sup> (Note 3)	417 -	568 243
Net income	417	811
Net income attributable to the Shareholder Net income attributable to non-controlling interest	402 15	804 7
Basic and diluted net income per common share before extraordinary item (dollars)	1.57	2.19
Extraordinary item per common share (dollars) Basic and diluted net income per common share (dollars)	- 1.57	0.95 3.14
Common shares outstanding (millions)	256.3	256.3

<sup>1</sup> Wholly attributable to the Shareholder.

# CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

Years Ended December 31		
(millions of dollars)	2015	2014
Net income	417	811
Other comprehensive income, net of income taxes (Note 10)		
Recognition of initial pension and other post-employment benefits regulatory asset related to facilities prescribed for rate regulation beginning in 2014 <sup>1</sup>	-	184
Actuarial gain (loss) and past service costs on re-measurement of liabilities for pension and other post-employment benefits <sup>2</sup>	148	(35)
Reclassification to income of amounts related to pension and other post-employment benefits <sup>3</sup>	18	27
Net loss on derivatives designated as cash flow hedges <sup>4</sup>	(5)	(2)
Reclassification to income of losses on derivatives designated as cash flow hedges <sup>5</sup>	16	14
Other comprehensive income	177	188
Comprehensive income	594	999
Comprehensive income attributable to the Shareholder	579	992
Comprehensive income attributable to non-controlling interest	15	7

<sup>1</sup> Net of income tax expenses of nil and \$61 million for 2015 and 2014, respectively.

<sup>2</sup> Net of income tax expenses of \$49 million and income tax recoveries of \$12 million for 2015 and 2014, respectively.

<sup>3</sup> Net of income tax expenses of \$7 million and \$10 million for 2015 and 2014, respectively.

<sup>4</sup> Net of income tax recoveries of \$2 million and \$1 million for 2015 and 2014, respectively.

<sup>5</sup> Net of income tax expenses of \$2 million for each of 2015 and 2014.

## **CONSOLIDATED STATEMENTS OF CASH FLOWS**

<b>'ears Ended December 31</b> millions of dollars)	2015	2014
Operating activities	447	044
et income	417	811
djust for non-cash items:	4 400	
Depreciation and amortization (Note 4)	1,100	754
Accretion on fixed asset removal and nuclear waste management liabilities (Note 8)	895	797
Earnings on nuclear fixed asset removal and nuclear waste management funds ( <i>Note 8</i> )	(704)	(714)
Pension and other post-employment benefit costs (Note 11)	483	460
Extraordinary item (Note 3)	-	(243)
Deferred income taxes and other accrued charges	23	56
Mark-to-market on derivative instruments	(218)	(52)
Provision for used nuclear fuel and low and intermediate level waste	<b>`117</b> ´	<b>5</b> 7
Regulatory assets and liabilities	141	(45)
Provision for materials and supplies	28	<b>`</b> 38 <sup>´</sup>
Regulatory disallowance related to the Niagara Tunnel project (Note 3)	-	77
Other	19	(2)
	2,301	1,994
ontributions to nuclear fixed asset removal and nuclear waste management funds ( <i>Note 8</i> )	(143)	(139)
penditures on fixed asset removal and nuclear waste	(218)	(212)
management (Note 8)		
eimbursement of expenditures on nuclear fixed asset removal and	76	77
nuclear waste management (Note 8)	(490)	(472)
ontributions to pension funds and expenditures on other	(480)	(473)
post-employment benefits and supplementary pension plans (Note 11)	(4.0)	(25)
penditures on restructuring	(16)	(35)
et changes to other long-term assets and liabilities	45	9
et changes to non-cash working capital balances (Note 17)	(100) 1,465	212
ash flow provided by operating activities	1,405	1,433
vesting activities vestment in deposit note (Note 6)	(180)	_
et proceeds from sale of property, plant and equipment	3	-
vestment in property, plant and equipment and intangible assets (Note 16)	(1,376)	(1,545)
ash flow used in investing activities	(1,553)	(1,545)
	(1,000)	(1,010)
nancing activities	045	200
suance of long-term debt (Note 6)	245	200
epayment of long-term debt (Note 6)	(503)	(3)
ettlement of cash flow hedges	(9)	-
stribution paid to non-controlling interest	(16)	(5)
suance of short-term notes (Note 7)	2,628	3,332
epayment of short-term notes (Note 7)	(2,403)	(3,364)
ash flow (used in) provided by financing activities	(58)	160
et (decrease) increase in cash and cash equivalents	(146)	48
ash and cash equivalents, beginning of year	610	562
ash and cash equivalents, end of year	464	610

## **CONSOLIDATED BALANCE SHEETS**

Less: accumulated amortization Other assets Nuclear fixed asset removal and nuclear waste management funds (Notes 8 and 16) Long-term materials and supplies (Note 16) Regulatory assets (Note 5) Investments subject to significant influence (Note 19)		
Current assets         Cash and cash equivalents         Receivables from related parties (Note 18)         Other current assets (Note 6)         Nuclear fixed asset removal and nuclear waste management funds (Notes 8 and 16)         Fuel inventory (Note 16)         Materials and supplies (Note 16)         Regulatory assets (Note 5)         Property, plant and equipment (Notes 4, 15, and 16)         Less: accumulated depreciation         Intangible assets (Notes 4 and 16)         Less: accumulated amortization         Other assets         Nuclear fixed asset removal and nuclear waste management funds (Notes 8 and 16)         Less: accumulated amortization         Example assets         Other assets         Nuclear fixed asset removal and nuclear waste management funds (Notes 8 and 16)         Long-term materials and supplies (Note 16)         Regulatory assets (Note 5)         Investments subject to significant influence (Note 19)	2015	2014
Cash and cash equivalents Receivables from related parties ( <i>Note 18</i> ) Other current assets ( <i>Note 6</i> ) Nuclear fixed asset removal and nuclear waste management funds ( <i>Notes 8 and 16</i> ) Fuel inventory ( <i>Note 16</i> ) Materials and supplies ( <i>Note 16</i> ) Regulatory assets ( <i>Note 5</i> ) Property, plant and equipment ( <i>Notes 4, 15, and 16</i> ) Less: accumulated depreciation Intangible assets ( <i>Notes 4 and 16</i> ) Less: accumulated amortization Other assets Nuclear fixed asset removal and nuclear waste management funds ( <i>Notes 8 and 16</i> ) Long-term materials and supplies ( <i>Note 16</i> ) Regulatory assets ( <i>Note 5</i> ) Investments subject to significant influence ( <i>Note 19</i> )		
Receivables from related parties (Note 18)         Other current assets (Note 6)         Nuclear fixed asset removal and nuclear waste management         funds (Notes 8 and 16)         Fuel inventory (Note 16)         Materials and supplies (Note 16)         Regulatory assets (Note 5)         Property, plant and equipment (Notes 4, 15, and 16)         Less: accumulated depreciation         Intangible assets (Notes 4 and 16)         Less: accumulated amortization         Other assets         Nuclear fixed asset removal and nuclear waste management funds (Notes 8 and 16)         Less: accumulated amortization         Other assets         Nuclear fixed asset removal and nuclear waste management funds (Notes 8 and 16)         Long-term materials and supplies (Note 16)         Regulatory assets (Note 5)         Investments subject to significant influence (Note 19)		
Other current assets ( <i>Note 6</i> ) Nuclear fixed asset removal and nuclear waste management funds ( <i>Notes 8 and 16</i> ) Fuel inventory ( <i>Note 16</i> ) Materials and supplies ( <i>Note 16</i> ) Regulatory assets ( <i>Note 5</i> ) <b>Property, plant and equipment</b> ( <i>Notes 4, 15, and 16</i> ) Less: accumulated depreciation <b>Intangible assets</b> ( <i>Notes 4 and 16</i> ) Less: accumulated amortization <b>Other assets</b> Nuclear fixed asset removal and nuclear waste management funds ( <i>Notes 8 and 16</i> ) Long-term materials and supplies ( <i>Note 16</i> ) Regulatory assets ( <i>Note 5</i> ) Investments subject to significant influence ( <i>Note 19</i> )	464	610
Nuclear fixed asset removal and nuclear waste management funds ( <i>Notes 8 and 16</i> ) Fuel inventory ( <i>Note 16</i> ) Materials and supplies ( <i>Note 16</i> ) Regulatory assets ( <i>Note 5</i> ) <b>Property, plant and equipment</b> ( <i>Notes 4, 15, and 16</i> ) Less: accumulated depreciation <b>Intangible assets</b> ( <i>Notes 4 and 16</i> ) Less: accumulated amortization <b>Other assets</b> Nuclear fixed asset removal and nuclear waste management funds ( <i>Notes 8 and 16</i> ) Long-term materials and supplies ( <i>Note 16</i> ) Regulatory assets ( <i>Note 5</i> ) Investments subject to significant influence ( <i>Note 19</i> )	545	482
funds (Notes 8 and 16) Fuel inventory (Note 16) Materials and supplies (Note 16) Regulatory assets (Note 5) Property, plant and equipment (Notes 4, 15, and 16) Less: accumulated depreciation Intangible assets (Notes 4 and 16) Less: accumulated amortization Other assets Nuclear fixed asset removal and nuclear waste management funds (Notes 8 and 16) Long-term materials and supplies (Note 16) Regulatory assets (Note 5) Investments subject to significant influence (Note 19)	298	136
Materials and supplies (Note 16)         Regulatory assets (Note 5)         Property, plant and equipment (Notes 4, 15, and 16)         Less: accumulated depreciation         Intangible assets (Notes 4 and 16)         Less: accumulated amortization         Other assets         Nuclear fixed asset removal and nuclear waste management funds (Notes 8 and 16)         Long-term materials and supplies (Note 16)         Regulatory assets (Note 5)         Investments subject to significant influence (Note 19)	15	25
Regulatory assets (Note 5)         Property, plant and equipment (Notes 4, 15, and 16)         Less: accumulated depreciation         Intangible assets (Notes 4 and 16)         Less: accumulated amortization         Other assets         Nuclear fixed asset removal and nuclear waste management funds (Notes 8 and 16)         Long-term materials and supplies (Note 16)         Regulatory assets (Note 5)         Investments subject to significant influence (Note 19)	344	334
Property, plant and equipment (Notes 4, 15, and 16)         Less: accumulated depreciation         Intangible assets (Notes 4 and 16)         Less: accumulated amortization         Other assets         Nuclear fixed asset removal and nuclear waste management funds (Notes 8 and 16)         Long-term materials and supplies (Note 16)         Regulatory assets (Note 5)         Investments subject to significant influence (Note 19)	96	94
Less: accumulated depreciation         Intangible assets (Notes 4 and 16)         Less: accumulated amortization         Other assets         Nuclear fixed asset removal and nuclear waste management funds (Notes 8 and 16)         Long-term materials and supplies (Note 16)         Regulatory assets (Note 5)         Investments subject to significant influence (Note 19)	628	167
Less: accumulated depreciation         Intangible assets (Notes 4 and 16)         Less: accumulated amortization         Other assets         Nuclear fixed asset removal and nuclear waste management funds (Notes 8 and 16)         Long-term materials and supplies (Note 16)         Regulatory assets (Note 5)         Investments subject to significant influence (Note 19)	2,390	1,848
Less: accumulated depreciation         Intangible assets (Notes 4 and 16)         Less: accumulated amortization         Other assets         Nuclear fixed asset removal and nuclear waste management	20.400	25.050
Intangible assets (Notes 4 and 16) Less: accumulated amortization Other assets Nuclear fixed asset removal and nuclear waste management funds (Notes 8 and 16) Long-term materials and supplies (Note 16) Regulatory assets (Note 5) Investments subject to significant influence (Note 19)	29,469	25,859
Less: accumulated amortization Other assets Nuclear fixed asset removal and nuclear waste management funds (Notes 8 and 16) Long-term materials and supplies (Note 16) Regulatory assets (Note 5) Investments subject to significant influence (Note 19)	8,874	8,266
Less: accumulated amortization Other assets Nuclear fixed asset removal and nuclear waste management funds (Notes 8 and 16) Long-term materials and supplies (Note 16) Regulatory assets (Note 5) Investments subject to significant influence (Note 19)	20,595	17,593
Less: accumulated amortization         Other assets         Nuclear fixed asset removal and nuclear waste management funds (Notes 8 and 16)         Long-term materials and supplies (Note 16)         Regulatory assets (Note 5)         Investments subject to significant influence (Note 19)	476	432
Nuclear fixed asset removal and nuclear waste management funds (Notes 8 and 16) Long-term materials and supplies (Note 16) Regulatory assets (Note 5) Investments subject to significant influence (Note 19)	378	356
Nuclear fixed asset removal and nuclear waste management funds (Notes 8 and 16) Long-term materials and supplies (Note 16) Regulatory assets (Note 5) Investments subject to significant influence (Note 19)	98	76
Nuclear fixed asset removal and nuclear waste management funds (Notes 8 and 16) Long-term materials and supplies (Note 16) Regulatory assets (Note 5) Investments subject to significant influence (Note 19)		
funds (Notes 8 and 16) Long-term materials and supplies (Note 16) Regulatory assets (Note 5) Investments subject to significant influence (Note 19)	15,121	14,354
Long-term materials and supplies (Note 16) Regulatory assets (Note 5) Investments subject to significant influence (Note 19)	13,121	14,004
Regulatory assets (Note 5) Investments subject to significant influence (Note 19)	337	338
Investments subject to significant influence (Note 19)	5,279	7,024
	336	348
	146	64
	21,219	22,128
	44,302	41,645

## **CONSOLIDATED BALANCE SHEETS**

As at December 31	0045	
(millions of dollars)	2015	2014
Liabilities		
Current liabilities		
Accounts payable and accrued charges (Note 18)	1,228	1,151
Short-term debt (Note 7)	225	-
Deferred revenue due within one year	12	12
Long-term debt due within one year (Note 6)	273	503
Income taxes payable	66	24
Regulatory liabilities (Note 5)	26	5
	1,830	1,695
Long-term debt (Note 6)	5,199	5,227
Other liabilities		
Fixed asset removal and nuclear waste management liabilities (Notes 8 and 16)	20,169	17,028
Pension liabilities (Note 11)	2,597	3,570
Other post-employment benefit liabilities (Note 11)	3.085	3,050
Long-term accounts payable and accrued charges	207	529
Deferred revenue	246	212
Deferred income taxes (Note 9)	890	828
Regulatory liabilities (Note 5)	34	39
	27,228	25,256
<b>F</b> 44		
<b>Equity</b> Common shares <i>(Note 14)</i> <sup>1</sup>	E 106	F 106
Retained earnings	5,126 5,098	5,126 4,696
Accumulated other comprehensive loss (Note 10)	5,098 (319)	4,696 (496)
Equity attributable to the Shareholder	9,905	9,326
בקטונץ מנווואטנמאופ נס נוופ סוומופווטועפו	5,505	9,320
Equity attributable to non-controlling interest (Note 21)	140	141
Total equity	10,045	9,467
	44,302	41,645

<sup>1</sup> 256,300,010 common shares outstanding at a stated value of \$5,126 million as at December 31, 2015 and 2014.

Commitments and Contingencies (Notes 6, 9, 11, and 15)

See accompanying notes to the consolidated financial statements

On behalf of the Board of Directors:

Bernard Lord (signed) Board Chair M. George Lewis (signed) Director

# CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDER'S EQUITY

Years Ended December 31		
(millions of dollars)	2015	2014
Common shares (Note 14)	5,126	5,126
Retained earnings		
Balance at beginning of year	4,696	3,892
Net income attributable to the Shareholder	402	804
Balance, end of year	5,098	4,696
Accumulated other comprehensive loss, net of income taxes (Note 10)		
Balance at beginning of year	(496)	(684)
Other comprehensive income	177	188
Balance, end of year	(319)	(496)
Equity attributable to the Shareholder	9,905	9,326
Equity attributable to non-controlling interest (Note 21)		
Balance at beginning of year	141	-
Capital contribution from non-controlling interest	-	141
Distribution to non-controlling interest	(16)	(7)
Net income attributable to non-controlling interest	<b>`15</b> ´	7
Balance, end of year	140	141
Total equity	10,045	9,467

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the years ended December 31, 2015 and 2014

## 1. DESCRIPTION OF BUSINESS

Ontario Power Generation Inc. (OPG or the Company) was incorporated on December 1, 1998 pursuant to the *Business Corporations Act* (Ontario) and is wholly owned by the Province of Ontario (the Province or the Shareholder). OPG is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario.

## 2. BASIS OF PRESENTATION

These consolidated financial statements have been prepared and presented in accordance with United States generally accepted accounting principles (US GAAP) and the rules and regulations of the United States (US) Securities and Exchange Commission for annual financial statements, as required by *Ontario Regulation 395/11*, as amended, a regulation under the *Financial Administration Act* (Ontario), effective January 1, 2012.

During the first quarter of 2014, OPG received exemptive relief from the Ontario Securities Commission requirements of section 3.2 of National Instrument 52-107 *Acceptable Accounting Policies and Auditing Standards*. The exemption allows OPG to file consolidated financial statements based on US GAAP without becoming a US Securities and Exchange Commission registrant, or issuing public debt. The exemption will terminate on the earliest of the following:

- January 1, 2019
- The financial year that commences after OPG ceases to have activities subject to rate regulation
- The effective date prescribed by the International Accounting Standards Board for the mandatory application of a standard within International Financial Reporting Standards specific to entities with rate-regulated activities.

All dollar amounts are presented in Canadian dollars, except in tabular format where noted. Certain of the 2014 comparative amounts have been reclassified from financial statements previously presented to conform to the 2015 consolidated financial statement presentation.

## 3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

## Consolidation

The consolidated financial statements of the Company include the accounts of OPG and its majority-owned subsidiaries, and a variable interest entity (VIE) where OPG is the primary beneficiary. All significant intercompany balances and intercompany transactions have been eliminated on consolidation.

Where OPG does not control an investment, but has significant influence over operating and financing policies of the investee, the investment is accounted for under the equity method. OPG co-owns the Portlands Energy Centre (PEC) gas-fired combined cycle generating station (GS) with TransCanada Energy Ltd. and co-owns the Brighton Beach gas-fired combined cycle generating station (Brighton Beach) with ATCO Power Canada Ltd. OPG accounts for its 50 percent ownership interest in each of these jointly controlled entities using the equity method.

## **Variable Interest Entities**

OPG performs ongoing analysis to assess whether it holds any VIEs. VIEs of which OPG is deemed to be the primary beneficiary are consolidated. The primary beneficiary of a VIE has both the power to direct the activities of the entity that most significantly impact its economic performance and the obligation to absorb losses of the entity that could potentially be significant to the Company. In circumstances where OPG is not deemed to be the primary beneficiary, the VIE is not recorded in OPG's consolidated financial statements.

In 2002, OPG and other Canadian nuclear waste producers established the Nuclear Waste Management Organization (NWMO) in accordance with the *Nuclear Fuel Waste Act* (NFWA). The primary long-term mandate of the NWMO is to implement an approach to address the long-term management of used nuclear fuel. In addition to the above mandate, the NWMO provides project management services for OPG's proposed Deep Geologic Repository (DGR) for the long-term management of low and intermediate level waste (L&ILW) and other nuclear lifecycle liability management services. OPG has the majority of voting rights at the NWMO Board of Directors' and members' level. The NFWA requires the nuclear fuel waste owners to establish and make payments into trust funds for the purpose of funding the implementation of the long-term nuclear used fuel management plan. OPG provides over 90 percent of NWMO's funding, primarily towards the design and implementation of Canada's Adaptive Phased Management plan for the long-term management of nuclear used fuel. As a result, OPG is expected to absorb a majority of the NWMO's expected losses through future funding in the event of any shortfall. Therefore, OPG holds a variable interest in the NWMO, of which it is the primary beneficiary. Accordingly, the applicable amounts in the accounts of the NWMO, after elimination of all significant intercompany transactions, are consolidated.

### **Use of Management Estimates**

The preparation of consolidated financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the consolidated financial statements, and the reported amounts of revenues and expenses for the reporting periods. Management evaluates these estimates on an ongoing basis based upon historical experience, current conditions, and assumptions believed to be reasonable at the time the assumption is made, with any adjustments recognized in the period incurred. Significant estimates are included in the determination of pension and other post-employment benefit (OPEB) balances, asset retirement obligations (AROs), income taxes (including deferred income taxes), contingencies, regulatory assets and liabilities, valuation of derivative instruments and investments in segregated funds, depreciation and amortization expenses, and inventories. Actual results may differ significantly from these estimates.

#### **Cash and Cash Equivalents and Short-Term Investments**

Cash and cash equivalents include cash on deposit and money market securities with a maturity of less than 90 days on the date of purchase. All other money market securities with a maturity on the date of purchase that is greater than 90 days, but less than one year, are recorded as short-term investments and classified as current assets. These securities are valued at the lower of cost and market.

#### Inventories

Inventories, consisting of fuel and materials and supplies, are measured at the lower of cost and net realizable value. Cost is determined as weighted average cost for fuel inventory and average cost for materials and supplies.

## Property, Plant and Equipment, Intangible Assets and Depreciation and Amortization

Property, plant and equipment (PP&E) and intangible assets are recorded at cost. Interest costs incurred during construction and development are capitalized as part of the cost of the asset based on the interest rates on OPG's long-term debt. Expenditures for replacements of major components are capitalized.

Depreciation and amortization rates for the various classes of assets are based on their estimated service lives. Any asset removal costs that have not been specifically provided for in current or previous periods are charged to operations, maintenance and administration (OM&A) expenses when incurred. Repairs and maintenance costs are also expensed when incurred.

PP&E are depreciated on a straight-line basis except for computers and transport and work equipment, which are mostly depreciated on a declining balance basis. Intangible assets, which consist of major application software, are amortized on a straight-line basis. As at December 31, 2015, the amortization periods of property, plant and equipment and intangible assets are as follows:

Nuclear generating stations and major components	15 to 74 years <sup>1</sup>
Thermal generating stations and major components	5 to 50 years
Hydroelectric generating stations and major components	10 to 100 years
Administration and service facilities	10 to 50 years
Computers, and transport and work equipment assets – declining balance	12% to 40% per year
Major application software	5 years
Service equipment	5 to 10 years

<sup>1</sup> As at December 31, 2015, the end of station life for depreciation purposes for the Darlington, Pickering, and Bruce A and B nuclear generating stations ranged between 2020 and 2061. Major components are depreciated over the lesser of the station life and the life of the components.

## **Asset Impairment**

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The review is based on the presence of impairment indicators such as the future economic benefit of the assets and external market conditions. The net carrying amount of assets is considered impaired if it exceeds the sum of the estimated undiscounted cash flows expected to result from the asset's use and eventual disposition. In cases where the sum of the undiscounted expected future cash flows is less than the carrying amount, an impairment loss is recognized. This loss equals the amount by which the carrying amount exceeds the fair value. Fair value is determined using expected discounted cash flows when quoted market prices are not available. The impairment is recognized in income in the period in which it is identified.

The carrying value of investments accounted for under the equity method are reviewed annually for the presence of any indicators of impairment. If an impairment exists and is determined to be other-than-temporary, an impairment charge is recognized. This charge equals the amount by which the carrying value exceeds the investment's fair value.

## **Rate Regulated Accounting**

The Ontario Energy Board Act, 1998 and Ontario Regulation 53/05 provide that OPG receives regulated prices for electricity generated from the Sir Adam Beck 1, 2 and Pump generating stations, the DeCew Falls 1 and 2 generating stations, the R.H. Saunders GS, the 48 hydroelectric generating stations prescribed for rate regulation effective in 2014, and the Pickering and Darlington nuclear generating stations. OPG's regulated prices for these facilities are determined by the Ontario Energy Board (OEB).

The OEB is a self-funding Crown corporation. Its mandate and authority come from the *Ontario Energy Board Act*, *1998*, the *Electricity Act*, *1998*, and a number of other provincial statutes. The OEB is an independent, quasi-judicial tribunal that reports to the Legislature of the Province through the Minister of Energy. It regulates market participants in Ontario's natural gas and electricity industries. The OEB carries out its regulatory functions through public hearings and other more informal processes such as consultations.

US GAAP recognizes that rate regulation can create economic benefits and obligations that are required by the regulator to be obtained from, or settled with, the customers. When the Company assesses that there is sufficient assurance that incurred costs in respect of the regulated facilities will be recovered in the future, those costs are

deferred and reported as a regulatory asset. When the Company is required to refund amounts to customers in the future in respect of the regulated facilities, including amounts related to costs that have not been incurred and for which the OEB has provided recovery through regulated prices, the Company records a regulatory liability.

Certain of the regulatory assets and liabilities recognized by the Company relate to variance and deferral accounts authorized by the OEB, including those authorized pursuant to *Ontario Regulation 53/05*. These accounts typically capture differences between actual costs and revenues and the corresponding forecast amounts approved by the OEB in setting regulated prices, or record the impact of items not reflected in the approved regulated prices. The measurement of these regulatory assets and liabilities is subject to certain estimates and assumptions, including assumptions made in the interpretation of *Ontario Regulation 53/05* and the OEB's decisions. The estimates and assumptions made in the interpretation of the regulation and the OEB's decisions are reviewed as part of the OEB's regulatory process.

Regulatory assets and liabilities for variance and deferral account balances approved by the OEB for inclusion in regulated prices are amortized based on approved recovery or repayment periods. Disallowed balances are charged to operations in the period that the OEB's decision is issued.

Regulatory assets and liabilities for variance and deferral account balances approved by the OEB are classified as current if they are expected to be recovered from, or refunded to, customers within 12 months of the end of the reporting period, based on recovery or repayment periods authorized by the OEB. All other regulatory asset and liability balances are classified as non-current on the consolidated balance sheets.

In addition to regulatory assets and liabilities for variance and deferral accounts, OPG recognizes regulatory assets and liabilities for unamortized amounts recorded in accumulated other comprehensive income (AOCI) in respect of pension and OPEB obligations, and deferred income taxes, in order to reflect the expected recovery or repayment of these amounts through future regulated prices charged to customers. There are measurement uncertainties related to these balances due to the assumptions made in the determination of pension and OPEB obligations and deferred income taxes attributed to the regulated facilities.

The regulatory asset for unamortized pension and OPEB amounts recorded in AOCI has reflected the OEB's use, since April 1, 2008, of the accrual basis of accounting for including pension and OPEB amounts in approved regulated prices for OPG. This is also the manner in which these costs are recognized in OPG's consolidated financial statements. Therefore, unamortized amounts in respect of OPG's pension and OPEB plans that are recognized in AOCI generally have not been reflected in the regulated prices until they are reclassified from AOCI and recognized as amortization components of the benefit costs for these plans. The regulatory asset is reversed as underlying unamortized balances are amortized as components of the benefit cost.

In setting OPG's regulated prices effective November 1, 2014, the OEB limited amounts for pension and OPEB costs allowed in the approved revenue requirements to the regulated business portion of the Company's cash expenditures on its pension and OPEB plans. It is the Company's position that this decision by the OEB does not constitute a change in the basis of rate recovery for OPG's of pension and OPEB costs. This position is based on the OEB's establishment of the Pension & OPEB Cash Versus Accrual Differential Deferral Account pursuant to its November 2014 decision, as discussed below, and the expectation expressed by the OEB in that decision that a transition from the accrual basis of recovery for OPG, if required, would be addressed in a future OPG rate proceeding, informed by the outcome of a future generic OEB proceeding related to the regulatory treatment and recovery of pension and OPEB costs. Accordingly, the Company continues to believe that there is sufficient likelihood that unamortized pension and OPEB amounts that have not yet been reclassified from AOCI will be included in future regulated prices or an OEB-authorized deferral or variance account as they are recognized in benefit costs. Therefore, the Company has continued to recognize a regulatory asset for these unamortized amounts, and also has recognized a regulatory asset for the balance of the Pension & OPEB Costs for the regulated business determined on an accrual basis and the corresponding actual expenditures for these plans. In May 2015, the OEB began a consultation process to

develop standard principles to guide its future review of pension and OPEB costs of rate regulated utilities in the electricity and natural gas sectors, including establishing appropriate regulatory mechanisms for cost recovery. OPG is participating in the consultation process, which is ongoing.

If, in a future proceeding, the OEB decides that the recovery basis for OPG's pension and OPEB amounts should be changed, OPG may be required to adjust the regulatory assets for unamortized pension and OPEB amounts recorded in AOCI and for the Pension & OPEB Cash Versus Accrual Differential Deferral Account.

See Notes 5, 8, 9, and 11 to these consolidated financial statements for additional disclosures related to the OEB's decisions, regulatory assets and liabilities, and rate regulated accounting.

## **Revenue Recognition**

All of OPG's electricity generation is offered into the real-time energy spot market administered by the Independent Electricity System Operator (IESO). Revenue is recognized as electricity is generated and metered to the IESO.

## Revenue Recognition - Regulated Generation

Energy revenue generated from OPG's regulated facilities is based on regulated prices determined by the OEB that currently include a base regulated price and rate riders for the recovery or repayment of approved variance and deferral account balances.

The base regulated prices in effect during 2015 and 2014 were determined by the OEB using a two-year forecast cost of service methodology based on revenue requirements, taking into account a forecast of production and operating costs for the regulated facilities and a return on rate base. Rate base is a regulatory construct that, for OPG, represents the average net level of investment in regulated fixed and intangible assets in-service and an allowance for working capital. The revenues from the regulated hydroelectric facilities are also subject to the OEB-approved hydroelectric incentive mechanism. The mechanism provides a pricing incentive to OPG to shift hydroelectric production from lower market price periods to higher market price periods, reducing the overall costs to customers.

The rate riders in effect during 2015 included those established by the OEB in 2014 in conjunction with the base regulated prices in effect since November 1, 2014 and those authorized by the OEB in 2015 based on OPG's application to recover the December 31, 2014 balances in most of the authorized regulatory variance and deferral accounts. The rate riders in effect during 2014 were established by the OEB in 2013 based on OPG's application to recover balances in most of the authorized variance and deferral accounts as at December 31, 2012. The OEB-authorized variance and deferral accounts are discussed in Note 5 to these consolidated financial statements.

## Revenue Recognition - Unregulated Generation and Other Revenue

The electricity generation from OPG's unregulated assets receives the Ontario electricity spot market price, except where an energy supply agreement (ESA) with the IESO or another contractual agreement is in place. As at December 31, 2015, most of OPG's operating unregulated assets are subject to an ESA. Revenue from the generating stations subject to an ESA is recognized in accordance with the terms of the agreement. Effective January 1, 2015, the Ontario Power Authority (OPA) merged with the IESO. The new entity continued under the name Independent Electricity System Operator. As such, the IESO is substituted as the counterparty of the ESAs or other agreements that were previously executed with the OPA.

OPG also sells into, and purchases from, interconnected markets of other provinces and the northeast and midwest regions of the US. All contracts that are not designated as hedges are recorded in the consolidated balance sheets at market value, with gains or losses recorded in the consolidated statements of income. Gains and losses on energy trading contracts (including those to be physically settled) are recorded on a net basis in the consolidated statements of income. Accordingly, power purchases of \$75 million were netted against revenue in 2015 (2014 – \$131 million).

OPG derives non-energy revenue under the terms of a lease arrangement and associated agreements with Bruce Power L.P. (Bruce Power) related to the Bruce nuclear generating stations. This includes lease revenue and revenue from heavy water sales, detritiation services and waste management services. OPG's net revenues from the lease of the Bruce stations and related agreements, including a portion of heavy water sales, are credited to customers and have therefore reduced regulated prices for the generation from the nuclear facilities owned and operated by OPG. The minimum lease payments are recognized in revenue on a straight-line basis over the term of the lease.

In addition, non-energy revenue includes isotope sales, real estate rentals and other service revenues. Revenues from these activities are recognized as services are provided, or as products are delivered.

## Fixed Asset Removal and Nuclear Waste Management Liabilities

OPG recognizes AROs for fixed asset removal and nuclear waste management, discounted for the time value of money. OPG estimates both the amount and timing of future cash expenditures based on the plans for fixed asset removal and nuclear waste management. The liabilities are initially recorded at their estimated fair value, which is based on a discounted value of the expected costs to be paid.

On an ongoing basis, the liabilities for nuclear fixed asset removal and nuclear waste management (Nuclear Liabilities) are increased by the present value of the incremental (variable) cost portion for the nuclear waste generated each year, with the corresponding amounts charged to operating expenses. Variable expenses relating to low and intermediate level nuclear waste are charged to OM&A expenses. Variable expenses relating to the management and storage of nuclear used fuel are charged to fuel expense. The liabilities may also be adjusted due to any changes in the estimated amount or timing of the underlying future cash flows, with any resulting changes in the related asset retirement costs capitalized as part of the carrying amount of the related fixed assets. A comprehensive reassessment of all underlying assumptions and baseline cost estimates for the Nuclear Liabilities is performed periodically. Changes in the Nuclear Liabilities resulting from changes in assumptions or estimates that impact the amount or timing of the originally estimated undiscounted cash flows are recorded as an adjustment to the liabilities. Any resulting changes in the related asset retirement costs are capitalized as part of the carrying amount of the carrying amount of nuclear fixed assets. Upon settlement of the liabilities, a gain or loss would be recorded.

Accretion arises because the fixed asset removal and nuclear waste management liabilities are reported on a net present value basis. Accretion expense is the increase in the carrying amount of the liabilities due to the passage of time.

The asset retirement cost is capitalized by increasing the carrying value of the related fixed assets. The capitalized cost is depreciated over the remaining service life of the related fixed assets and is included in depreciation and amortization expenses.

OPG has no legal obligation associated with the decommissioning of its hydroelectric generating facilities and the costs cannot be reasonably estimated because of the long service life of these assets. With either maintenance efforts or rebuilding, the water control structures are assumed to be used for the foreseeable future. Accordingly, OPG has not recognized a liability for the decommissioning of its hydroelectric generating facilities.

## Nuclear Fixed Asset Removal and Nuclear Waste Management Funds

Pursuant to the Ontario Nuclear Funds Agreement (ONFA) between OPG and the Province, OPG established a Used Fuel Segregated Fund (Used Fuel Fund) and a Decommissioning Segregated Fund (Decommissioning Fund) (together the Nuclear Funds). The Used Fuel Fund is intended to fund expenditures associated with the long-term management of radioactive used nuclear fuel bundles, while the Decommissioning Fund was established to fund the future costs of nuclear fixed asset removal, long-term L&ILW management, and certain costs for used fuel storage incurred after the nuclear stations are shut down. OPG maintains the Nuclear Funds in third-party custodial and trust accounts that are segregated from the rest of OPG's assets.

OPG's investments in the Nuclear Funds and the corresponding amounts payable to/receivable from the Province are classified as held-for-trading. The Nuclear Funds are measured at fair value based on the bid prices of the underlying equity and fixed income securities, and, in the case of the alternative investment portfolio, using appropriate valuation techniques as outlined in Note 13 to these consolidated financial statements, with realized and unrealized gains and losses recognized in OPG's consolidated statements of income.

## **Derivatives**

All derivatives, including embedded derivatives that must be separately accounted for, generally are classified as held-for-trading and recorded at fair value in the consolidated balance sheets. Transaction costs are expensed as incurred for financial instruments classified or designated as held-for-trading.

Derivatives qualify for hedge accounting if they meet stringent documentation requirements, and if the derivative instrument that is designated as a hedge is expected to effectively hedge the identified risk throughout the life of the hedged item. At the inception of a hedging relationship, OPG documents the relationship between the hedging instrument and the hedged item, its risk management objective, and its strategy for undertaking the hedge. A documented assessment is made, both at the inception of a hedge and on an ongoing basis, of whether or not the derivatives that are used in hedging transactions are highly effective in offsetting the changes attributable to the hedged risks in the fair values or cash flows of the hedged items.

All derivative contracts not designated as hedges are recorded on the consolidated balance sheets as derivative assets or liabilities at fair value with changes in the fair value recorded in the revenue of the Services, Trading, and Other Non-Generation segment. Refer to Note 12 for a discussion of OPG's risk exposures and the derivative instruments used to manage these risks.

### **Fair Value Measurements**

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly arm's-length transaction between market participants at the measurement date. Fair value measurements are required to reflect the assumptions that market participants would use in pricing an asset or liability based on the best available information. These assumptions include the risks inherent in a particular valuation technique, such as a pricing model, and the risks inherent in the inputs to the model. OPG uses a fair value hierarchy, grouping assets and liabilities into three levels based on the relative objectivity of the inputs used to measure fair value, with Level 1 representing the most objective. Refer to Note 13 for a discussion of fair value measurements and the fair value hierarchy.

### **Research and Development**

Research and development costs are expensed as incurred. Research and development costs incurred to discharge long-term obligations, such as the Nuclear Liabilities, for which specific provisions have already been made, are charged to the related liability.

#### Leases

Leases are evaluated and classified as either operating or capital leases for financial reporting purposes. Capital leases, which transfer substantially all of the risks and benefits incidental to ownership of the leased item, are capitalized at the inception of the lease at the fair value of the leased property or, if lower, at the present value of the minimum lease payments. Capital leases are depreciated over the shorter of the estimated useful life of the asset and the lease term.

Leases where the lessor retains substantially all the risks and benefits incidental to ownership of the asset are classified as operating leases. Operating lease payments, other than contingent rentals, are recognized as an expense in the consolidated statements of income on a straight-line basis over the lease term. Where the amount of

rent expense recognized is different from the actual operating lease payment, other than contingent rentals, the difference is deferred and included as assets or liabilities on the consolidated balance sheets.

### **Pension and Other Post-Employment Benefits**

OPG's post-employment benefit programs consist of a contributory defined benefit registered pension plan, a defined benefit supplementary pension plan, and other post-retirement benefits (OPRB) including group life insurance and health care benefits, and long-term disability (LTD) benefits. Post-employment benefit programs are also provided by the NWMO, which is consolidated into OPG's financial results. Unless otherwise noted, information on the Company's post-employment benefit programs is presented on a consolidated basis.

OPG accrues its obligations under pension and OPEB plans in accordance with US GAAP. The obligations for pension and OPRB are determined using the projected benefit method pro-rated on service. The obligation for LTD benefits is determined using the projected benefit method on a terminal basis. Pension and OPEB obligations are impacted by factors including interest rates, adjustments arising from plan amendments, demographic assumptions, experience gains or losses, salary levels, inflation, and health care cost escalation assumptions. Pension and OPEB costs and obligations are determined annually by independent actuaries using management's best estimate assumptions.

Assumptions are significant inputs to actuarial models that measure pension and OPEB obligations and related effects on operations. Discount rate, inflation and changes in salary levels are three critical assumptions in the determination of benefit costs and obligations. In addition, the expected return on plan assets is a critical assumption in the determination of registered pension plan costs. These assumptions, as well as other assumptions involving demographic factors such as retirement age, mortality, and employee turnover, are evaluated periodically by management in consultation with independent actuaries. During the evaluation process, the assumptions are updated to reflect past experience and expectations for the future. Actual results in any given year will often differ from actuarial assumptions because of economic and other factors. In accordance with US GAAP, for pension and OPRB, the impact of these updates and differences on the respective benefit obligations is accumulated and amortized over future periods; for LTD benefits, the impact of these updates and differences is immediately recognized as OPEB costs in the period incurred.

The discount rates, which are representative of AA corporate bond yields, are used to calculate the present value of the expected future cash flows on the measurement date to determine the projected benefit obligations for the Company's employee benefit plans. A lower discount rate increases the benefit obligations and increases benefit costs. The expected rate of return on plan assets is based on the pension fund's asset allocation, as well as the expected return considering long-term historical risks and returns associated with each asset class within the plan portfolio. A lower expected rate of return on plan assets increases pension cost.

Pension fund assets include equity securities, corporate and government debt securities, pooled funds, real estate, infrastructure, and other investments. These assets are managed by professional investment managers. The pension fund does not invest in equity or debt securities issued by OPG. Pension fund assets are valued using market-related values for purposes of determining the amortization of actuarial gains or losses and the expected return on plan assets. The market-related value recognizes gains and losses on equity assets relative to a six percent assumed real return over a five-year period.

Pension and OPEB costs include current service costs, interest costs on the obligations, the expected return on pension plan assets, adjustments for plan amendments, and adjustments for actuarial gains or losses, which result from changes in assumptions and experience gains and losses. Past service costs or credits arising from pension and OPRB plan amendments are amortized on a straight-line basis over the expected average remaining service life to full eligibility of the employees covered by the corresponding plan. Past service costs or credits arising from amendments to LTD benefits are immediately recognized as OPEB costs in the period incurred. Due to the long-term nature of pension and OPRB liabilities, the excess of the net cumulative unamortized gain or loss, over 10 percent of

the greater of the benefit obligation and the market-related value of the plan assets (the corridor), is amortized over the expected average remaining service life of the employees, which represents the period during which the associated economic benefits are expected to be realized by the Company. Actuarial gains or losses for LTD benefits are immediately recognized as OPEB costs in the period incurred.

OPG recognizes on the consolidated balance sheets the funded status of its defined benefit plans. The funded status is measured as the difference between the fair value of plan assets and the benefit obligation on a plan-by-plan basis.

Actuarial gains or losses and past service costs or credits arising during the year that are not recognized immediately as components of benefit costs are recognized as increases or decreases in other comprehensive income (OCI), net of income taxes. These unamortized amounts in AOCI are subsequently reclassified and recognized as components of pension and OPRB costs as described above.

OPG records an offsetting regulatory asset or liability for the portion of the adjustments to AOCI that is attributable to the regulated operations in order to reflect the expected recovery or refund of these amounts through future regulated prices charged to customers. For the recoverable or refundable portion attributable to regulated operations, OPG records a corresponding change in this regulatory asset or liability for the amount of the increases or decreases in OCI and for the amounts reclassified from AOCI into benefit costs during the period.

When the recognition of the transfer of employees and employee-related benefits gives rise to both a curtailment and a settlement, the curtailment is accounted for prior to the settlement. A curtailment is the loss by employees of the right to earn future benefits under the plan. A settlement is the discharge of a plan's liability.

### **Income Taxes and Investment Tax Credits**

OPG is exempt from income tax under the *Income Tax Act* (Canada). However, under the *Electricity Act, 1998*, OPG is required to make payments in lieu of corporate income taxes to the Ontario Electricity Financial Corporation (OEFC). These payments are calculated in accordance with the *Income Tax Act* (Canada) and the *Taxation Act, 2007* (Ontario), as modified by the *Electricity Act, 1998* and related regulations. This results in OPG effectively paying taxes similar to what would be imposed under the federal and Ontario tax acts.

OPG's operations are complex and the computation of the provision for income taxes involves interpretation of the various tax statutes and regulations. OPG has taken certain filing positions in calculating the amount of its income tax provision. These filing positions may be challenged on audit and some of them possibly disallowed, resulting in a potential significant change in OPG's tax provision upon reassessment.

OPG follows the liability method of accounting for income taxes. Under the liability method, deferred income tax assets and liabilities are determined based on differences between the accounting and tax bases of assets and liabilities. Deferred amounts are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. The effect of a change in tax rates on deferred income tax assets and liabilities is included in income in the period the change is enacted.

If management determines that it is more likely than not that some, or all, of a deferred income tax asset will not be realized, a valuation allowance is recorded to report the balance at the amount expected to be realized.

OPG recognizes deferred income taxes associated with its regulated operations and records an offsetting regulatory asset or liability for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers.

Tax benefits associated with income tax positions taken, or expected to be taken, in a tax return and investment tax credits are recorded only when the more likely than not recognition threshold is satisfied. Tax benefits and investment tax credits recognized are measured at the largest amount of benefit that is greater than 50 percent likely of being realized upon settlement.

Investment tax credits are recorded as a reduction to income tax expense. OPG classifies interest and penalties associated with unrecognized tax benefits as income tax expense.

## **Changes in Accounting Policies and Estimates**

## Useful Lives of Nuclear Long-Lived Assets

The accounting assumptions related to the estimated end-of-life dates for long-lived assets require significant management judgment, including consideration of various technological and other factors. The station end-of-life assumptions also impact the measurement of OPG's ARO and other related accounting assumptions. OPG reviews the useful life assumptions for its generating stations on a regular basis.

In December 2015, OPG revised its accounting assumptions for the estimated useful lives of its nuclear generating stations. Effective December 31, 2015:

- the average service lives of the Bruce A GS and Bruce B GS were extended from 2048 to 2052 and from 2019 to 2061, respectively, to reflect the estimated end-of-life dates reflected in the updated refurbishment agreement between the IESO and Bruce Power, which was announced in December 2015
- the average service life of the Darlington GS was extended by one year to 2052 to reflect the approval of the refurbishment schedule in 2015
- the average service life of the Pickering GS was extended by less than one year to reflect the technical confidence that all six operating units of the station will operate to the end of 2020.

To reflect the above changes, OPG recognized a total increase of \$2,330 million in the Nuclear Liabilities and a corresponding increase in the related asset retirement costs capitalized to PP&E, effective December 31, 2015. These increases were primarily due to the changes in the estimated lives for the Bruce nuclear generating stations. The nuclear ARO associated with the Pickering GS and Darlington GS was impacted by the changes to the Bruce station service lives because the costs of the fleet-wide waste management programs are shared by all of OPG's nuclear stations based on used nuclear fuel and waste volumes. Consistent with the changes in the end-of-life dates for the Bruce nuclear generating stations and the December 2015 amendments to the lease agreement between OPG and Bruce Power (Bruce Lease), the term of the lease was also extended for accounting purposes, in line with the refurbishment plans for the stations.

The above changes in station end-of-life assumptions are expected to decrease total depreciation expense by approximately \$35 million in 2016, and to increase accretion expense by approximately \$75 million in 2016. The existing Bruce Lease Net Revenues Variance Account and a new deferral account proposed in OPG's December 2015 application to the OEB, discussed below, are expected to largely offset these impacts. The Bruce Lease Net Revenues Variance Account captures between OPG's revenues and costs related to the Bruce nuclear generating stations and the corresponding forecasts included in OEB-approved nuclear regulated prices.

In December 2015, as required by the OEB's previous decisions and orders, OPG applied to the OEB for an accounting order establishing a new deferral account to record, effective January 1, 2016, the revenue requirement impact on the prescribed nuclear facilities of changes to the Nuclear Liabilities and depreciation expense arising from the changes in the nuclear station end-of-life dates effective December 31, 2015. In January 2016, the OEB issued an order establishing the requested account on an interim basis to allow OPG to begin booking entries into the account effective in January 2016. The OEB's final decision on the account is expected later in 2016.

## Impacts of Regulation of the Newly Regulated Hydroelectric Facilities and the OEB's Decisions

As a result of the rate regulation of 48 previously unregulated hydroelectric facilities effective in 2014, OPG recognized regulatory assets related to deferred income taxes, and unamortized amounts recorded in AOCI in respect of pension and OPEB obligations. The increase in the regulatory asset related to deferred income taxes resulted in an extraordinary gain of \$243 million in the consolidated statement of income for 2014. The recognition of

the initial regulatory assets related to pension and OPEB obligations resulted in an increase of \$184 million in OCI, net of \$61 million in income taxes.

The OEB's decision on OPG's September 2013 application for new regulated prices was issued in November 2014, followed by the OEB's order in December 2014 establishing new regulated prices for these facilities effective November 1, 2014. The OEB's decision and order also approved a \$1,365 million addition to regulated rate base due to the completion and in-service addition of the Niagara Tunnel project in March 2013. The approved rate base amount was lower than the cost of the asset which resulted in a write-off of costs of \$77 million in 2014. In January 2016, the OEB issued its decision on OPG's December 2014 motion asking the OEB to review and vary parts of its November 2014 decision, including the disallowed Niagara Tunnel expenditures. In its January 2016 decision, the OEB reversed a portion of the original disallowance of the Niagara Tunnel expenditures. As a result, OPG expects to record a gain of approximately \$21 million in the first quarter of 2016 to recognize the expected future recovery from customers of the portion of the disallowance reversed by the OEB's motion decision.

## Pension and Other Post-Employment Benefits

The weighted average discount rate used to determine the projected pension benefit obligations and the projected benefit obligations for OPEB as at December 31, 2015 was 4.1 percent. This represents an increase, compared to the 4.0 percent discount rate that was used to determine the obligations as at December 31, 2014.

The deficit for the registered pension plans decreased, for accounting purposes, from \$3,262 million as at December 31, 2014 to \$2,315 million as at December 31, 2015, largely as a result of the return on pension fund assets in 2015, the increase in discount rates at the 2015 year-end, and employer contributions to the pension fund during the year, partially offset by the current service and interest costs for the year.

The projected benefit obligations for OPEB increased slightly from \$3,143 million as at December 31, 2014 to \$3,188 million as at December 31, 2015.

As at December 31, 2015, the unamortized net actuarial loss and unamortized past service costs for the pension and OPEB plans totalled \$3,646 million (2014 – \$4,869 million). Details of the unamortized net actuarial loss and unamortized past service costs as at December 31, 2015 and 2014 are as follows:

	Regis Pensio		Suppler Pensior		Other Emplo Bene	yment
(millions of dollars)	2015	2014	2015	2014	2015	2014
Net actuarial gain not yet subject to amortization due to use of market-related values	(809)	(878)	-	-	-	-
Net actuarial loss not subject to amortization due to use of the corridor	1,544	1,568	30	32	293	288
Net actuarial loss subject to amortization	2,288	3,443	47	65	247	350
Unamortized net actuarial loss	3,023	4,133	77	97	540	638
Unamortized past service costs	_	-	-	-	6	1

A change in the following assumptions, holding all other assumptions constant, would increase (decrease) pension and OPEB costs for the year ended December 31, 2015 as follows:

Pension Plans <sup>1</sup> (28) 28 (62) 65	Pension Plans <sup>1</sup> n/a n/a (1) 1	Benefits <sup>1</sup> n/a n/a (13)
(62)	n/a (1)	n/a (13)
(62)	n/a (1)	n/a (13)
(62)	(1)	(13)
		14
106	2	1
(99)	(1)	(1)
24	3	1
(24)	(2)	(1)
n/a	n/a	84
1/4		(60)
	24 (24) n/a	24 3 (24) (2)

n/a - change in assumption not applicable.

<sup>1</sup> Excludes the impact of regulatory variance and deferral accounts.

#### Recent Accounting Pronouncements

#### Revenue from Contracts with Customers

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update No. 2014-09, *Revenue from Contracts with Customers* (ASU 2014-09), which supersedes nearly all existing revenue recognition guidance, including industry-specific guidance, under US GAAP. The core principle of ASU 2014-09 is to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration to which an entity expects to be entitled for those goods or services. In July 2015, the FASB approved the deferral of the effective date of the new revenue standard by one year for public entities reporting under US GAAP from 2017 to 2018. As such, the standard is expected to be applicable to OPG for its 2018 fiscal year, including interim periods. OPG is currently assessing the impact of this new standard on its consolidated financial statements.

#### Balance Sheet Classification of Deferred Income Taxes

In November 2015, the FASB issued Accounting Standards Update No. 2015-17, *Income Taxes (Topic 740): Balance Sheet Classification of Deferred Taxes* (ASU 2015-17), which will require entities to present deferred income tax assets and deferred income tax liabilities as noncurrent in a classified balance sheet. ASU 2015-17 simplifies the existing guidance, which requires entities to separately present deferred income tax assets and deferred income tax liabilities as current in a classified balance sheet. As permitted by the standard, OPG early adopted the updates to ASC 740, *Income Taxes* for the fiscal year ended December 31, 2015 on a retrospective basis. Other than the change in the balance sheet presentation of deferred income tax assets and deferred income tax liabilities, the amended standard does not impact OPG's consolidated financial statements.

## Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share

In May 2015, the FASB issued Accounting Standards Update No. 2015-07, *Fair Value Measurement (Topic 820) – Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share (or its Equivalent)*. Under the new guidance, investments measured at net asset value, as a practical expedient for fair value, are excluded from the fair value hierarchy. Removing investments measured using the practical expedient from the fair value hierarchy is intended to eliminate the diversity in practice that currently exists with respect to the categorization of these investments. The only criterion for categorizing investments in the fair value hierarchy will be the observability of the inputs. The amendments will be effective for OPG's 2016 fiscal year, including interim periods. As the amendments pertain to disclosures, OPG does not expect the updated standard to result in adjustments in balances reported on the consolidated financial statements.

## Lease Accounting

In February 2016, the FASB issued the accounting update for ASC Topic 840, *Leases*. The update includes comprehensive changes to existing guidance for lease accounting, particularly for lessees. The standard is expected to be effective for OPG's 2019 fiscal year, including interim periods. Early adoption is permitted. OPG is currently assessing the impact of the new standard on its consolidated financial statements.

## 4. PROPERTY, PLANT AND EQUIPMENT, INTANGIBLE ASSETS AND DEPRECIATION AND AMORTIZATION

Depreciation and amortization expenses, including amounts recognized in regulatory variance and deferral accounts authorized by the OEB, for the years ended December 31 consist of the following:

(millions of dollars)	2015	2014
Depreciation	617	574
Amortization of intangible assets	20	13
Amounts recognized in regulatory variance and deferral accounts	(1)	(123)
Amortization of regulatory assets and liabilities (Note 5)	464	290
	1,100	754

Property, plant and equipment as at December 31 consist of the following:

(millions of dollars)	2015	2014
Nuclear generating stations	11,999	9,313
Regulated hydroelectric generating stations	9,351	9,287
Contracted generation portfolio generating stations	3,713	3,600
Other property, plant and equipment	1,839	1,833
Construction in progress	2,567	1,826
	29,469	25,859
Less: accumulated depreciation		
Generating stations	7,359	6,771
Other property, plant and equipment	1,515	1,495
	8,874	8,266
	20,595	17,593

Construction in progress as at December 31 consists of the following:

Darlington Refurbishment	1,868	1,309
Peter Sutherland Sr. GS	95	12
Other	604	505

Interest capitalized to construction and development in progress at an average rate of five percent during 2015 (2014 – five percent) was \$102 million (2014 – \$135 million).

Intangible assets as at December 31 consist of the following:

(millions of dollars)	2015	2014
Nuclear generating stations	118	116
Regulated hydroelectric generating stations	4	4
Contracted generation portfolio generating stations	5	5
Computer software and other intangible assets	321	261
Development in progress	28	46
	476	432
Less: accumulated amortization		
Generating stations	115	109
Computer software and other intangible assets	263	247
	378	356
	98	76

The estimated aggregate amortization expense for each of the five succeeding years for intangible assets in service as at December 31, 2015 is as follows:

(millions of dollars)	2016	2017	2018	2019	2020
Amortization expense	21	17	14	12	2

## 5. REGULATORY ASSETS AND LIABILITIES

In December 2014, OPG filed an application with the OEB to recover approximately \$1.8 billion in December 31, 2014 balances in most of its authorized regulatory variance and deferral accounts. A partial settlement agreement between OPG and intervenors providing for the recovery of approximately \$1.5 billion of the total amount sought by OPG was approved by the OEB in June 2015 (the Partial Settlement Agreement). On September 10, 2015, the OEB issued its decision approving for recovery, without adjustments, the remaining balances totalling \$263 million requested in OPG's application, which were not covered by the Partial Settlement Agreement.

These approvals include recovery of \$714 million in the Pension and OPEB Cost Variance Account, recorded during 2013 and 2014, over six years starting on July 1, 2015 and \$225 million recorded in this variance account prior to 2013 that will continue to be recovered until December 31, 2024 as previously authorized by the OEB. The remaining approved balances of \$809 million include the \$154 million portion of the Bruce Lease Net Revenues Variance Account related to the impact of the derivative liability embedded in the Bruce Lease as of December 31, 2014, which would continue to be recovered on the basis of OPG's expected payments to Bruce Power and associated income tax impacts, and other account balances, the majority of which were approved for recovery over a period of

18 months from July 1, 2015 to December 31, 2016. The OEB's October 2015 order also approved the continuation of previously authorized variance and deferral accounts, including those authorized pursuant to *Ontario Regulation 53/05.* 

On October 8, 2015, the OEB issued an order implementing its June 2015 and September 2015 decisions on OPG's application. The order authorized OPG to recover \$933 million over the period from October 1, 2015 to December 31, 2016 through new rate riders for generation from all of OPG's regulated nuclear and regulated hydroelectric facilities during this period, as shown below. The remaining approved balances will be subject to recovery after 2016.

(\$/Megawatt hour)	Nuclear	Hydroelectric		
2015/2016 rate riders	10.84	3.19		
2015/2016 interim period rate riders <sup>1</sup>	2.17	0.64		
Rate riders for the period from October 1, 2015 to December 31, 2016	13.01	3.83		

The new riders were made effective July 1, 2015 and implemented effective October 1, 2015 by the OEB. The interim period rate riders were authorized by the OEB to allow for the recovery of the new riders for the period from July 1, 2015 to September 30, 2015. The revenue for the new riders for the July 1, 2015 to September 30, 2015 period was accrued in 2015. The income impact of the revenue accrual was largely offset by a corresponding increase in amortization expense related to regulatory assets and liabilities for deferral and variance accounts.

The new rate riders are in addition to those authorized by the OEB in its December 2014 order for production from OPG's nuclear and hydroelectric generating stations prescribed for rate regulation prior to 2014, for the period from January 1, 2015 to December 31, 2015. Those rate riders provided for the net recovery of the balances in certain variance accounts as at December 31, 2013, totaling \$189 million, over the 12-month period in 2015 as approved by the OEB.

Any shortfall or over-recovery of the approved balances due to differences between actual and forecast production are recorded in the authorized Nuclear Deferral and Variance Over/Under Recovery Variance Account and the Hydroelectric Deferral and Variance Over/Under Recovery Variance Account to be collected from, or refunded to, customers in the future.

In 2015, OPG recorded amortization of the regulatory assets and liabilities for the deferral and variance account balances approved for disposition on a straight-line basis, based on recovery or repayment periods authorized by the OEB's December 2014 and October 2015 orders. In 2014, OPG recorded such amortization on a straight-line basis based on balances and recovery or repayment periods authorized by the OEB's approval, in 2013, of a settlement agreement between OPG and intervenors on OPG's application to dispose of the December 31, 2012 balances in the deferral and variance accounts.

During the period from November 1, 2014 to December 31, 2015, OPG recorded additions to the variance and deferral accounts as authorized by the OEB's December 2014 and October 2015 orders, relative to the forecast amounts reflected in the cost of service regulated prices in effect during this period, where applicable. During the period from January 1, 2014 to October 31, 2014, additions to the variance and deferral accounts were recorded as authorized by the OEB's 2013 decision and order.

Where authorized by the OEB, OPG recorded interest on the unamortized balances in the applicable variance and deferral accounts at the OEB-prescribed rates of 1.47 percent per annum for the period from January 1, 2015 to March 31, 2015 and 1.10 percent per annum for the period from April 1, 2015 to December 31, 2015.

The regulatory assets and liabilities recorded as at December 31 are as follows:

(millions of dollars)	2015	2014
Regulatory assets		
Variance and deferral accounts authorized by the OEB		
Pension and OPEB Cost Variance Account	865	939
Pension and OPEB Cash Versus Accrual Differential Deferral Account (Note 11)	315	36
Nuclear Liability Deferral Account	190	286
Hydroelectric Surplus Baseload Generation Variance Account	114	67
Bruce Lease Net Revenues Variance Account	95	315
Nuclear Deferral and Variance Over/Under Recovery Variance Account	82	56
Other variance and deferral accounts	92	268
	1,753	1,967
	2 202	4.000
Pension and OPEB regulatory asset (Note 11)	3,362 792	4,363
Deferred income tax liability (Note 9)	792	861
Total regulatory assets	5,907	7,191
Less: current portion	628	167
Non-current regulatory assets	5,279	7,024
	0,210	1,021
Regulatory liabilities		
Variance and deferral accounts authorized by the OEB		
Other variance and deferral accounts	60	44
Total regulatory liabilities	60	44
Less: current portion	26	5
Non-current regulatory liabilities	34	39

The changes in the regulatory assets and liabilities during 2015 and 2014 are as follows:

(millions of dollars)	Pension and OPEB Cost Variance	Pension & OPEB Cash vs Accrual Differential Deferral	Nuclear Liability Deferral	Hydro- electric Surplus Baseload Generation Variance	Bruce Lease Net Revenues Variance	Nuclear Deferral & Variance Over/Under Recovery Variance	Other Variance and Deferral (net)	Pension and OPEB Regula- tory Asset	Deferred Income Taxes
Net regulatory assets January 1, 2014	667	-	254	19	353	43	323	3,158	559
Increase	312	36	82	48	4	15	51	1,205	302
Interest	-	-	-	-	-	1	5	-	-
Amortization	(40)	-	(50)	-	(42)	(3)	(155)	-	-
Net regulatory assets December 31, 2014	939	36	286	67	315	56	224	4,363	861
Increase (decrease)	-	279	-	82	(149)	44	(26)	(1,001)	(69)
Interest	-	-	-	-	-	1	3	-	-
Amortization	(74)	-	(96)	(35)	(71)	(19)	(169)	-	-
Net regulatory assets December 31, 2015	865	315	190	114	95	82	32	3,362	792

## **Pension and OPEB Cost Variance Account**

As authorized by the OEB, for the period from March 1, 2011 to October 30, 2014, the Pension and OPEB Cost Variance Account recorded the differences between OPG's actual pension and OPEB costs for the regulated business determined on an accrual basis and related tax impacts, and corresponding forecast amounts reflected in the regulated prices then in effect. In its November 2014 decision, the OEB determined that the pension and OPEB amounts reflected in OPG's new regulated prices effective November 1, 2014 would be limited to the Company's estimated minimum contributions to its registered pension plan and a forecast of OPG's expenditures on the OPEB and supplementary pension plans. As such, the OEB ordered the Pension and OPEB Cost Variance Account to record only amortization beginning on November 1, 2014.

In its October 2015 order, the OEB approved the continuation of the previously authorized recovery of 10/12 of the account balance as at December 31, 2012 over a 144-month period to December 31, 2024. Amounts recorded in the account in 2013 and 2014 were approved for recovery over a 72-month period to June 30, 2021 by the OEB's October 2015 order.

## Pension & OPEB Cash Versus Accrual Differential Deferral Account

In its November 2014 decision and December 2014 order, the OEB established the Pension & OPEB Cash Versus Accrual Differential Deferral Account. Effective November 1, 2014, this deferral account records the difference between OPG's actual pension and OPEB costs for the regulated business determined on an accrual basis under US GAAP and OPG's corresponding actual cash expenditures for these plans. The balance in the account as at December 31, 2015 represents the excess of costs calculated using the accrual basis over the cash basis for the period from November 1, 2014 to December 31, 2015. The Company has recognized the amount set aside in the deferral account as a regulatory asset. The OEB's November 2014 decision indicated that the future recovery, if any, of amounts recorded in the deferral account would be subject to the outcome of the generic OEB proceeding on the regulatory treatment and recovery of pension and OPEB costs. The OEB's consultation process to develop standard principles to guide its review of pension and OPEB costs of rate regulated utilities in the electricity and natural gas sectors, including establishing appropriate regulatory mechanisms for cost recovery, began in May 2015 and is ongoing.

## **Nuclear Liability Deferral Account**

In accordance with *Ontario Regulation 53/05*, the OEB has authorized the Nuclear Liability Deferral Account (NLDA) in connection with changes to OPG's liabilities for nuclear used fuel management and nuclear decommissioning and L&ILW management associated with the nuclear facilities owned and operated by OPG, which are comprised of the Pickering and Darlington nuclear generating stations. The deferral account records the revenue requirement impact associated with the changes in these liabilities arising from an approved reference plan, in accordance with the terms of the ONFA. During 2012, the Province approved the 2012 ONFA Reference Plan covering the period from 2012 to 2016, with an effective date of January 1, 2012. As the regulated prices in effect prior to November 1, 2014 did not reflect the impact of the 2012 ONFA Reference Plan, OPG recorded an increase to the regulatory asset for the NLDA during the period from January 1, 2012 to October 31, 2014. Components of the change in the regulatory asset for the NLDA for the year ended December 31, 2014 is summarized below. There were no additions to the account in 2015.

(millions of dollars)	2014
Fuel expense	23
Low and intermediate level waste management variable expenses <sup>1</sup>	1
Depreciation expense	43
Income taxes	15
	82

<sup>1</sup> Amount was recorded as a reduction to OM&A expenses.

In its October 2015 order, the OEB approved the recovery of the account balance as at December 31, 2014 over an 18-month period from July 1, 2015 to December 31, 2016.

### Hydroelectric Surplus Baseload Generation Variance Account

The Hydroelectric Surplus Baseload Generation Variance Account records the impact of foregone production at OPG's regulated hydroelectric facilities due to surplus baseload generation conditions. The variance account was authorized by the OEB effective March 1, 2011 for the regulated hydroelectric facilities prescribed for rate regulation prior to 2014, and effective November 1, 2014 for the applicable regulated hydroelectric facilities prescribed for rate regulation effective in 2014.

In its November 2014 decision and December 2014 order, the OEB approved the recovery of the account balance as at December 31, 2013 over a 12-month period beginning on January 1, 2015. The OEB's October 2015 order provided for the recovery of amounts recorded in the account during 2014 over an 18-month period from July 1, 2015 to December 31, 2016.

### **Bruce Lease Net Revenues Variance Account**

In accordance with *Ontario Regulation 53/05*, the OEB is required to include the difference between OPG's revenues and costs associated with its ownership of the two nuclear stations on lease to Bruce Power in the determination of the regulated prices for production from OPG's regulated nuclear facilities. The OEB established a variance account that captures differences between OPG's revenues and costs related to the Bruce nuclear generating stations and the corresponding forecasts included in approved nuclear regulated prices.

In 2013, the OEB ordered the portion of the balance in the Bruce Lease Net Revenues Variance Account related to the impact of the derivative liability embedded in the terms of the Bruce Lease in effect prior to December 2015 to be recovered on the basis of OPG's expected rent rebate payments to Bruce Power and associated income tax impacts. The OEB's October 2015 order reaffirmed this approach. In December 2015, as a result of amendments to the Bruce Lease, OPG reversed the derivative liability, with a corresponding reduction to the regulatory asset for this account. Amounts collected from customers for the derivative liability for periods after its reversal are subject to refund in the future and recognized as a regulatory liability as part of the variance account balance.

In its October 2015 order, the OEB approved the continuation of the previously authorized recovery of the nonderivative portion of the account balance as at December 31, 2012 over a 48-month period ending December 31, 2016. The non-derivative portion of amounts recorded in the account in 2013 and 2014 was approved for recovery over an 18-month period from July 1, 2015 to December 31, 2016 by the OEB's October 2015 order.

#### **Other Variance Accounts**

#### Regulatory assets

As at December 31, 2015 and 2014, regulatory assets for other variance and deferral accounts included amounts for the Capacity Refurbishment Variance Account, the Pension & OPEB Cash Payment Variance Account, the Hydroelectric Deferral and Variance Over/Under Recovery Variance Account, the Pickering Life Extension Depreciation Variance Account, and the Nuclear Development Variance Account.

Pursuant to *Ontario Regulation 53/05*, the Capacity Refurbishment Variance Account captures variances from forecasts reflected in the regulated prices for capital and non-capital costs incurred to increase the output of, refurbish, or add operating capacity to the regulated facilities. This includes variances related to the refurbishment of the Darlington nuclear generating station, life extension initiatives at the Pickering nuclear generating station, and other projects.

The Pension & OPEB Cash Payment Variance Account records, effective November 1, 2014, the difference between OPG's actual contributions to its registered pension plan and expenditures on its OPEB and supplementary pension plans for the regulated business, and the corresponding amounts reflected in the regulated prices.

The Pickering Life Extension Depreciation Variance Account balance was recorded wholly during the period from November 1, 2014 to December 31, 2014. This balance represents an offset to the customer credit for the reduction in depreciation expense for the Pickering nuclear generating station that was reflected both as a reduction to the base regulated prices effective November 1, 2014 and the nuclear rate rider in effect during 2014.

The Nuclear Development Variance Account records variances between the actual non-capital costs incurred and firm financial commitments made in the course of planning and preparation for the development of proposed new nuclear generation facilities and the corresponding forecasts reflected in the regulated prices approved by the OEB.

## Regulatory liabilities

As at December 31, 2015 and 2014, regulatory liabilities for other variance and deferral accounts included amounts for the Hydroelectric Water Conditions Variance Account, the Ancillary Services Net Revenue Variance Account, the Income and Other Taxes Variance Account, and the Hydroelectric Incentive Mechanism Variance Account.

The Hydroelectric Water Conditions Variance Account captures the impact of differences in regulated hydroelectric electricity production due to differences between forecast water conditions underlying the production forecast approved by the OEB in setting regulated hydroelectric prices, and the actual water conditions.

The Ancillary Services Net Revenue Variance Account was authorized by the OEB to capture differences between actual nuclear and regulated hydroelectric ancillary services net revenue and the forecast amounts of such revenue approved by the OEB in setting regulated prices.

The Income and Other Taxes Variance Account includes deviations in income taxes for the regulated business, from those approved by the OEB in setting regulated prices, caused by changes in tax rates and rules, as well as reassessments.

The Hydroelectric Incentive Mechanism Variance Account records a credit to customers equal to 50 percent of OPG's hydroelectric incentive mechanism revenues above a specified threshold for the regulated hydroelectric facilities.

In its November 2014 decision and December 2014 order, the OEB approved the recovery or repayment of certain of the account balances of the other variance accounts as at December 31, 2013 over a 12-month period beginning on January 1, 2015. In its October 2015 order, the OEB approved the recovery or repayment of the majority of the account balances of the other variance and deferral accounts as at December 31, 2014, less amounts approved in the December 2014 order, over an 18-month period from July 1, 2015 to December 31, 2016.

## Pension and OPEB Regulatory Asset

The Pension and OPEB Regulatory Asset represents unamortized amounts in respect of OPG's pension and OPEB plans that have been recognized in OCI and not yet reclassified into the amortization component of the benefit costs in respect of these plans. These amounts are expected to be recovered from customers through future regulated prices. The regulatory asset is reversed as underlying unamortized balances are amortized as components of benefit costs. Refer to Note 3 for a detailed discussion of the rate recovery methodology for pension and OPEB costs under the heading, *Rate Regulated Accounting*. The AOCI amounts related to pension and OPEB plans are presented in Note 11.

## **Deferred Income Taxes**

OPG is required to recognize deferred income taxes associated with its rate regulated operations, including deferred income taxes on temporary differences related to the regulatory assets and liabilities recognized for accounting

purposes. In addition, OPG is required to recognize a regulatory asset or liability for the amount of deferred income taxes expected to be included in future regulated prices and recovered from, or paid to, customers. Income taxes are discussed in Note 9.

## 6. LONG-TERM DEBT

Long-term debt consists of the following as at December 31: 1

(millions of dollars)	2015	2014
Notes payable to the OEFC		
Senior Notes <sup>2</sup>		
3.43% due 2015	-	500
4.91% due 2016	270	270
5.35% due 2017	900	900
5.27% due 2018	395	395
5.44% due 2019	365	365
4.56% due 2020	660	660
4.28% due 2021	185	185
3.30% due 2022	150	150
3.12% due 2023	40	40
5.07% due 2041	300	300
4.36% due 2042	200	200
UMH Energy Partnership <sup>3</sup> Senior Notes		
7.86% due to 2041	187	190
PSS Generating Station Limited Partnership <sup>4</sup>		
Senior Notes		
4.90% due to 2067	245	-
Lower Mattagami Energy Limited Partnership <sup>5</sup>		
Senior Notes		
2.35% due 2017	200	200
4.46% due 2021	225	225
3.53% due 2024	200	200
5.26% due 2041	250	250
5.05% due 2043	200	200
4.26% due 2046	275	275
4.26% due 2052	225	225
	5,472	5,730
Less: due within one year	273	503
Long-term debt	5,199	5,227

<sup>1</sup> The interest rates disclosed reflect the effective interest rate of the debt.

<sup>2</sup> OEFC senior debt is entitled to receive, in full, amounts owing in respect of the senior debt and is pari passu to the Lower Mattagami Energy Limited Partnership (LME) senior notes.

<sup>3</sup> These notes are secured by the assets of the Upper Mattagami and Hound Chute project. Principal repayments of approximately \$3 million per year are made on a semi-annual basis until maturity in 2041, at which time the remaining principal balance of \$116 million becomes due.

<sup>4</sup> These notes are secured by the assets of the Peter Sutherland Sr. GS project. The notes have an interest-only feature for the first ten years and will be amortized with blended semi-annual principal and interest payment thereafter until maturity in 2067, at which time the remaining principal balance of \$49 million becomes due.

<sup>5</sup> These notes are secured by the assets of the Lower Mattagami River project, including existing and new operating facilities, and are recourse to OPG until the recourse release date. These notes rank pari passu to the OEFC senior notes.

Since December 2014, OPG has maintained an \$800 million general corporate credit facility with the OEFC in support of its financing requirements up to the end of 2016. As at December 31, 2015 and 2014, there were no amounts outstanding under this facility. The credit facility expires on December 31, 2016.

Interest paid in 2015 was \$269 million (2014 – \$273 million), of which \$261 million (2014 – \$264 million) relates to interest paid on long-term debt.

The book value of the pledged assets as at December 31, 2015 was \$3,520 million (2014 - \$3,271 million).

In the fourth quarter of 2015, PSS Generating Station LP, a subsidiary of OPG, issued long-term debt totalling \$245 million in support of the Peter Sutherland Sr. GS project. The majority of the debt proceeds, totalling \$180 million, were invested in a structured deposit note with staggered maturity dates ranging from January 2016 to April 2017. Of the total amount invested as at December 31, 2015, \$110 million is reported as Other current assets, and the remaining \$70 million as Other long-term assets on the consolidated balance sheets, based on the terms of the deposit note.

A summary of the contractual maturities of all long-term borrowings outstanding as at December 31, 2015, by year, is as follows:

(millions of dollars)	
2016	273
2017	1,103
2018	398
2019	368
2020	663
Thereafter	2,667
	5,472

## 7. SHORT-TERM DEBT AND NET INTEREST EXPENSE

OPG maintains a \$1 billion revolving committed bank credit facility, which is divided into two \$500 million multi-year term tranches. In the second quarter of 2015, OPG renewed and extended both tranches by one year to May 2020. As at December 31, 2015 and 2014, there were no outstanding borrowings under the bank credit facility.

As at December 31, 2015, the LME maintained a \$500 million bank credit facility to support the funding requirements for the Lower Mattagami River project including support for the LME's commercial paper program. The facility originally consisted of two \$300 million multi-year tranches. The first and second tranches were to mature in August 2019 and August 2015, respectively. In the third quarter of 2015, OPG extended the maturity of the first tranche to August 2020. During the same period, the second tranche was reduced to \$200 million and extended to August 2016. As at December 31, 2015, there was external commercial paper of \$225 million outstanding under LME's commercial paper program (2014 – nil). There were no amounts outstanding under LME's bank credit facility as at December 31, 2015 and 2014. OPG also maintains a \$700 million credit facility with the OEFC in support of the Lower Mattagami River project. As at December 31, 2015, there were no outstanding borrowings under this credit facility. This credit facility expires in June 2016.

As at December 31, 2015, OPG maintained \$25 million of short-term, uncommitted overdraft facilities and \$456 million of short-term, uncommitted credit facilities, which support the issuance of the Letters of Credit. OPG uses Letters of Credit to support its supplementary pension plans and for other general corporate purposes. As at December 31, 2015, a total of \$384 million of Letters of Credit had been issued under these facilities. This included

\$345 million for the supplementary pension plans, \$38 million for general corporate purposes, and \$1 million related to the operation of the PEC.

The Company has an agreement to sell an undivided co-ownership interest in its current and future accounts receivable to an independent trust. The maximum amount of co-ownership interest that can be sold under this agreement is \$150 million. The agreement expires November 30, 2016. As at December 31, 2015, there were Letters of Credit outstanding under this agreement of \$150 million (2014 – \$150 million), which were issued in support of OPG's supplementary pension plans.

In October 2014, UMH Energy Partnership entered into an \$8 million short-term, uncommitted overdraft facility and \$16 million of irrevocable, standby Letters of Credit facilities in support of its operations. As at December 31, 2015, total Letters of Credit of \$14 million had been issued under these facilities.

The following table summarizes the net interest expense for the years ended December 31:

(millions of dollars)	2015	2014
Interest on long-term debt	285	291
Interest on short-term debt	8	9
Interest income	(9)	(10)
Interest capitalized to property, plant and equipment and intangible assets	(102)	(135)
Interest related to regulatory assets and liabilities <sup>1</sup>	(2)	(75)
Net interest expense	180	80

Includes interest to recognize the cost of financing related to regulatory variance and deferral accounts, as authorized by the OEB, and interest deferred in the Capacity Refurbishment Variance Account and the Bruce Lease Net Revenues Variance Account.

# 8. FIXED ASSET REMOVAL AND NUCLEAR WASTE MANAGEMENT LIABILITIES AND FUNDS

The liabilities for fixed asset removal and nuclear waste management on a present value basis consist of the following as at December 31:

(millions of dollars)	2015	2014
Liability for nuclear used fuel management Liability for nuclear decommissioning and L&ILW waste management Liability for non-nuclear fixed asset removal	12,793 6,999 377	10,459 6,204 365
Fixed asset removal and nuclear waste management liabilities	20,169	17,028

The changes in the fixed asset removal and nuclear waste management liabilities for the years ended December 31 are as follows:

(millions of dollars)	2015	2014
Liabilities, beginning of year	17,028	16,257
Increase in liabilities due to accretion <sup>1</sup>	906	867
Increase in liabilities reflecting changes to the estimated useful lives of nuclear generating stations ( <i>Note 3</i> )	2,330	-
Increase in liabilities due to nuclear used fuel and nuclear waste management expenses and other expenses <sup>1</sup>	123	116
Liabilities settled by expenditures on fixed asset removal and nuclear waste management	(218)	(212)
Liabilities, end of year	20,169	17,028

<sup>1</sup> Amounts shown exclude the impact of regulatory variance and deferral accounts.

OPG's fixed asset removal and nuclear waste management liabilities are comprised of expected costs to be incurred up to and beyond termination of operations and the closure of nuclear and thermal generating facilities, and other facilities. Costs will be incurred for activities such as preparation for safe storage, dismantling, demolition and disposal of facilities and equipment, remediation and restoration of sites, and the ongoing and long-term management of nuclear used fuel and L&ILW material.

The determination of the accrual for fixed asset removal and nuclear waste management costs requires significant assumptions since these programs are long-term in nature. The most recent comprehensive update of the cost estimates for the nuclear decommissioning and nuclear waste management liabilities is contained in the approved 2012 ONFA Reference Plan. The next ONFA Reference Plan is expected to be completed in 2016 and will cover the 2017-2021 period.

As discussed in Note 3, effective December 31, 2015, OPG recognized an increase in the Nuclear Liabilities of \$2,330 million and a corresponding increase in asset retirement costs capitalized to PP&E to reflect changes in the estimated useful lives of the Company's nuclear generating stations. The increase in the liabilities recorded on December 31, 2015 was determined by discounting the net incremental cash flows at 3.21 percent.

For the purposes of calculating OPG's Nuclear Liabilities, as at December 31, 2015, consistent with the current accounting end-of-life assumptions, nuclear station decommissioning is projected to occur over approximately the next 50 years. The estimates for the Nuclear Liabilities include cash flow estimates for decommissioning the nuclear stations for approximately 40 years after stations are shut down and to 2078 for placement of used fuel into the long-term disposal repository, followed by extended monitoring.

The significant assumptions underlying operational, technical, and economic factors used in the calculation of the accrued Nuclear Liabilities are subject to periodic review. Changes to these assumptions, including changes to assumptions on the timing of the nuclear waste programs including construction of waste disposal facilities, station end-of-life dates, waste disposal methods, financial indicators, or the technology employed may result in significant changes to the value of the accrued liabilities. With programs of this duration and the evolving technology to handle the nuclear waste, there is a significant degree of uncertainty surrounding the measurement of the costs for these long-term programs. These costs may increase or decrease over time.

## Liability for Nuclear Used Fuel Management Costs

The liability for nuclear used fuel management represents the cost of managing the highly radioactive used nuclear fuel bundles. The federal NFWA, proclaimed into force in 2002, required that Canada's nuclear fuel waste owners form a nuclear waste management organization, and that each waste owner establish a trust fund for used fuel management costs. This organization, the NWMO, is responsible for the design and implementation of Canada's plan for the long-term management of nuclear used fuel waste. To estimate its liability for nuclear used fuel management costs, OPG has adopted a conservative approach consistent with the Adaptive Phased Management concept approved by the Government of Canada, which assumes a deep geologic repository as part of the long-term management of nuclear used fuel of 2035 at the earliest.

# Liability for Nuclear Decommissioning and L&ILW Management Costs

The liability for nuclear decommissioning and L&ILW management represents the estimated costs of decommissioning the nuclear generating stations after the end of their service lives, as well as the cost of managing L&ILW generated by the stations. The significant assumptions used in estimating future nuclear fixed asset removal costs include a deferred dismantlement basis for decommissioning of the stations, whereby the reactors will remain in a safe state condition for a 30-year period prior to an approximate 10-year dismantlement period.

The life cycle costs of L&ILW management include the costs of processing and storage of such radioactive wastes during and following the operation of the nuclear stations, as well as the costs of the ultimate long-term management of these wastes. The current assumptions used to establish the accrued costs for the management of L&ILW include

an L&ILW DGR. Agreement was previously reached with local municipalities for OPG to develop a deep geologic repository for the long-term management of L&ILW adjacent to OPG's Western Waste Management Facility. OPG has suspended design activities for the L&ILW DGR pending receipt of the site preparation and construction licence.

## Liability for Non-Nuclear Fixed Asset Removal Costs

The liability for non-nuclear fixed asset removal primarily represents the estimated costs of decommissioning OPG's thermal generating stations at the end of their services lives. The liability is based on third-party cost estimates after an in-depth review of plant sites and an assessment of required clean-up and restoration activities, completed in 2011 for most of the thermal generating stations. For the purpose of measuring the liability, asset removal activities are estimated to take place over the next 15 years. As at December 31, 2015, the liability for non-nuclear fixed asset removal was \$377 million (2014 – \$365 million).

## **Ontario Nuclear Funds Agreement**

In accordance with the ONFA, OPG sets aside and invests funds that are held in segregated custodian and trustee accounts specifically for discharging its obligation for nuclear decommissioning and long-term nuclear waste management. The Decommissioning Fund was established to fund the future costs of nuclear fixed asset removal, long-term L&ILW management, and certain costs for used fuel storage incurred after the stations are shut down. The Used Fuel Fund was established to fund future costs of long-term nuclear used fuel management. OPG makes contributions to the Nuclear Funds based on the approved ONFA Reference Plan in effect.

OPG makes quarterly payments to the Used Fuel Fund over the life of its nuclear generating stations, as specified in the ONFA, including contributions to the NFWA Trust (the Trust). The Trust forms part of the Used Fuel Fund, and contributions to the Trust, as required by the NFWA, may be applied towards OPG's ONFA payment obligations. Required funding for 2015 under the ONFA was \$143 million (2014 – \$139 million). Based on the approved 2012 ONFA Reference Plan, OPG is required to contribute annual amounts to the Used Fuel Fund, ranging from \$150 million to \$288 million over the years 2016 to 2019. Contributions are not currently required to the Decommissioning Fund based on the approved 2012 ONFA Reference Plan. Since OPG is responsible for the risks associated with liability cost increases and investment returns in the Decommissioning Fund, future contributions to the Decommissioning Fund may be required should the fund be in an underfunded position at the time of the next ONFA Reference Plan review. The required future ONFA contributions are disclosed in Note 15.

The *Nuclear Safety and Control Act* (Canada) requires OPG to have sufficient funds available to discharge the current nuclear decommissioning and waste management liabilities. As required by the terms of the ONFA, the Province has provided a Provincial Guarantee to the Canadian Nuclear Safety Commission (CNSC) since 2003, on behalf of OPG. The Provincial Guarantee provides for any shortfall between the CNSC consolidated financial guarantee requirement and the value of the Nuclear Funds. OPG pays the Province an annual guarantee fee of 0.5 percent of the amount of the Provincial Guarantee. The current value of the Provincial Guarantee amount of \$1,551 million is in effect through to the end of 2017. Based on this guarantee amount, OPG paid a guarantee fee of \$8 million to the Province for each of 2014 and 2015.

The investments in the Nuclear Funds include a diversified portfolio of equities and fixed income securities that are invested across geographic markets, as well as investments in infrastructure, real estate, and agriculture. The Nuclear Funds are invested to fund long-term liability requirements and, as such, the portfolio asset mix is structured to achieve the required return over a long-term horizon. While short-term fluctuations in market value will occur, managing the long-term return of the Nuclear Funds remains the primary goal. OPG jointly oversees the investment management of the Nuclear Funds with the Province.

## **Decommissioning Fund**

OPG bears the risk and liability for cost estimate changes and fund earnings in the Decommissioning Fund. As at December 31, 2015, the Decommissioning Fund was in an overfunded position.

Upon termination of the ONFA, the Province has a right to any excess funds in the Decommissioning Fund, which is the excess of the fair market value of the Decommissioning Fund assets over the estimated completion costs, as per the most recently approved ONFA Reference Plan. When the Decommissioning Fund is overfunded, OPG limits the earnings recognized in its consolidated financial statements by recording a payable to the Province, such that the balance of the Decommissioning Fund is equal the cost estimate of the liability based on the most recently approved ONFA Reference Plan plus the portion of the surplus, if any, that OPG may direct to be treated as a contribution to the Used Fuel Fund. The payable to the Province may be reduced in subsequent periods in the event that the Decommissioning Fund earns less than its target rate of return or in the event that a new ONFA Reference Plan is approved with a higher estimated decommissioning liability. When the Decommissioning Fund is underfunded, the earnings on the Decommissioning Fund reflect actual fund returns based on the market value of the assets.

The Province's right to any excess funding in the Decommissioning Fund upon termination of the ONFA results in OPG capping its annual earnings at 3.25 percent plus the long-term Ontario Consumer Price Index (CPI) specified in the most recently approved ONFA Reference Plan, which is the rate of growth in the liability for the estimated completion cost, as long as the Decommissioning Fund is in an overfunded status of less than 120 percent.

Under the ONFA, if there is a surplus in the Decommissioning Fund such that the liabilities, as defined by the most recently approved ONFA Reference Plan, are at least 120 percent funded, OPG may direct up to 50 percent of the surplus over 120 percent to be treated as a contribution to the Used Fuel Fund, with the OEFC entitled to a distribution of an equal amount. Therefore, when the Decommissioning Fund is at least 120 percent funded, OPG recognizes 50 percent of the excess greater than 120 percent in income.

## Used Fuel Fund

OPG is responsible for the risk and liability of cost increases for used fuel waste management under the ONFA, subject to specified graduated liability thresholds, which limit OPG's total financial exposure for the first 2.23 million nuclear used fuel bundles at approximately \$14.2 billion in present value dollars as at December 31, 2015. The graduated liability thresholds do not apply to incremental used fuel bundles beyond 2.23 million.

Under the ONFA, the Province guarantees OPG's annual return in the Used Fuel Fund at 3.25 percent plus the change in the Ontario CPI for funding related to the first 2.23 million used fuel bundles (committed return). OPG recognizes the committed return on the Used Fuel Fund as earnings on the nuclear fixed asset removal and nuclear waste management funds. The difference between the committed return and the actual market return determined based on the fair value of the fund assets related to the first 2.23 million used fuel bundles is recorded as due to or due from the Province. The amount due to or due from the Province represents the amount OPG would pay to or receive from the Province if the committed return were to be settled as of the consolidated balance sheet date. As prescribed under the ONFA, OPG's contributions for fuel bundles in excess of 2.23 million are not subject to the Province's guaranteed rate of return, and earn a return based on changes in the market value of the assets of the Used Fuel Fund.

Under the ONFA, the Province is entitled to any surplus in the Used Fuel Fund, subject to a threshold funded ratio of 110 percent compared to the value of the associated liabilities based on the most recently approved ONFA Reference Plan. Upon termination of the Used Fuel Fund, the Province is entitled to any surplus above the 100 percent funded threshold.

## **Nuclear Funds**

The nuclear fixed asset removal and nuclear waste management funds as at December 31 consist of the following:

	Fair Value	
(millions of dollars)	2015	2014
Decommissioning Fund	7,834	7,346
Due to Province – Decommissioning Fund	(1,285)	(1,100)
¥	6,549	6,246
Used Fuel Fund <sup>1</sup>	10,290	9,562
Due to Province – Used Fuel Fund	(1,703)	(1,429)
	8,587	8,133
Total Nuclear Funds	15,136	14,379
Less: current portion	15	25
Non-current Nuclear Funds	15,121	14,354

<sup>1</sup> The Ontario NFWA Trust represented \$3,409 million as at December 31, 2015 (2014 – \$3,114 million) of the Used Fuel Fund on a fair value basis.

The fair value of the securities invested in the Nuclear Funds as at December 31 is as follows:

	Fair	Value
(millions of dollars)	2015	2014
Cash and cash equivalents and short-term investments	343	464
Alternative investments	1,620	1,003
Pooled funds	1,311	1,293
Marketable equity securities	8,621	8,176
Fixed income securities	6,219	5,969
Net receivables/payables	10	3
	18,124	16,908
Due to Province	(2,988)	(2,529)
	15,136	14,379

The historical cost, gross unrealized aggregate appreciation and depreciation of investment, gross unrealized foreign exchange gains, and fair value of the Nuclear Funds as at December 31, 2015 and 2014 are summarized as follows:

	Decommissioning	2015 Used Fuel	
(millions of dollars)	Fund	Fund	Total
Historical cost Gross unrealized gains (losses)	6,608	8,819	15,427
Aggregate appreciation	1,098	1,283	2,381
Aggregate depreciation	(297)	(383)	(680)
Foreign exchange	425	571	996
Due to Province	7,834 (1,285)	10,290 (1,703)	18,124 (2,988)
	(1,203)	(1,703)	(2,300)
Total fair value	6,549	8,587	15,136
Less: current portion	5	10	15
Non-current fair value	6,544	8,577	15,121

		2014	
	Decommissioning	Used Fuel	
(millions of dollars)	Fund	Fund	Total
Historical cost	6,188	8,163	14,351
Gross unrealized gains (losses)			
Aggregate appreciation	1,218	1,441	2,659
Aggregate depreciation	(150)	(174)	(324)
Foreign exchange	<b>9</b> 0´	132	222
	7,346	9,562	16,908
Due to Province	(1,100)	(1,429)	(2,529)
Fair value	6,246	8,133	14,379
Less: current portion	7	18	25
Non-current fair value	6,239	8,115	14.354

Net realized and unrealized gains or losses from investments for the years ended December 31, 2015 and 2014 are summarized as follows:

		2015	
	Decommissioning	Used Fuel	
(millions of dollars)	Fund	Fund	Total
Net realized gains			
Realized gains excluding foreign exchange	159	221	380
Realized foreign exchange gains	56	71	127
Net realized gains	215	292	507
Net unrealized gains			
Unrealized losses excluding foreign exchange	(267)	(367)	(634)
Unrealized foreign exchange gains	335	439	774
<u></u>			
Net unrealized gains	68	72	140

	2014		
(millions of dollars)	Decommissioning Fund	Used Fuel Fund	Total
Net realized gains			
Realized gains	401	545	946
Realized foreign exchange gains	36	36	72
Net realized gains	437	581	1,018
Net unrealized gains			
Unrealized gains	75	38	113
Unrealized foreign exchange gains	63	82	145
Net unrealized gains	138	120	258

The change in the Nuclear Funds for the years ended December 31 is as follows:

	Fair \	/alue
(millions of dollars)	2015	2014
Decommissioning Fund, beginning of year	6,246	5,967
ncrease in fund due to return on investments	507	782
Decrease in fund due to reimbursement of eligible expenditures	(19)	(27)
Increase in due to Province	(185)	(476)
Decommissioning Fund, end of year	6,549	6,246
Jsed Fuel Fund, beginning of year	8,133	7.529
ncrease in fund due to contributions made	143	139
ncrease in fund due to return on investments	642	954
Decrease in fund due to reimbursement of eligible expenditures	(57)	(50)
ncrease in due to Province	(274)	(439)
Jsed Fuel Fund, end of year	8,587	8,133

The earnings from the Nuclear Funds during 2015 and 2014 were impacted by the Bruce Lease Net Revenues Variance Account authorized by the OEB. The earnings on the Nuclear Funds for the years ended December 31 are as follows:

(millions of dollars)	2015	2014
Decommissioning Fund Used Fuel Fund Bruce Lease Net Revenues Variance Account	322 368 14	306 515 (107)
Total earnings	704	714

## 9. INCOME TAXES

OPG follows the liability method of accounting for income taxes. The Company records an offsetting regulatory asset or liability for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers for generation from OPG's regulated facilities.

Significant components of the income tax expense (recovery) are presented in the table below:

(millions of dollars)	2015	2014
Current income tax expense (recovery):		
Current payable	137	123
Change in income tax positions	(10)	(15)
Income tax components of regulatory variance and deferral accounts	(1)	(10)
Scientific Research and Experimental Development investment tax credits	(55)	(29)
Other	(12)	14
	59	83
Deferred income tax expense (recovery):		
Change in temporary differences	3	100
Income tax components of regulatory variance and deferral accounts	(43)	(69)
Regulatory asset for deferred income taxes	73	25
	33	56
Income tax expense	92	139

A reconciliation between the statutory and the effective rate of income taxes is as follows:

(millions of dollars)	2015	2014
Income before income taxes and extraordinary item	509	707
	303	101
Combined Canadian federal and provincial statutory enacted	00 5%	00 50/
income tax rates	26.5%	26.5%
Statutory income tax rates applied to accounting income	135	187
(Decrease) increase in income taxes resulting from:		
Income tax components of regulatory variance and deferral accounts	(44)	(79)
Non-taxable income items	(8)	(6)
Regulatory asset for deferred income taxes	73	25
Scientific Research and Experimental Development	(43)	(16)
investment tax credits, net of income tax	<b>、</b>	
Other	(21)	28
	(43)	(48)
Income tax expense	92	139
Effective rate of income taxes	18.1%	19.7%

The income tax effects of temporary differences that give rise to deferred income tax assets and liabilities as at December 31 are as follows:

(millions of dollars)	2015	2014
Deferred income tax assets:		
Fixed asset removal and nuclear waste management liabilities	5,032	4,247
Other liabilities and assets	1,689	1,984
	6,721	6,231
Deferred income tax liabilities: Property, plant and equipment and intangible assets Nuclear fixed asset removal and nuclear waste management funds	(2,119) (3,784)	(1,478) (3,595)
Other liabilities and assets	(1,708) (7,611)	(1,986) (7,059)
Net deferred income tax liabilities	(890)	(828)

During 2015, OPG recorded a decrease in the deferred income tax liability for the income taxes that are expected to be recovered or refunded through regulated prices charged to customers of \$69 million (2014 – \$22 million). Since these deferred income taxes are expected to be refunded through future regulated prices, OPG recorded a corresponding decrease to the regulatory asset for deferred income taxes. As a result, the deferred income tax expense for 2015 and 2014 was not impacted.

The following table summarizes the deferred income tax liabilities recorded for the rate regulated operations that are expected to be recovered through future regulated prices:

(millions of dollars)	2015	2014
January 1:		
Deferred income tax liabilities on temporary differences related to regulated operations	644	418
Deferred income tax liabilities resulting from the regulatory asset for deferred income taxes	217	141
	861	559
Impact of rate regulation of hydroelectric facilities in 2014:		
Deferred income tax liabilities on temporary differences as of June 30, 2014	-	243
related to the facilities prescribed for regulation effective July 1, 2014		
Deferred income tax liabilities resulting from the regulatory asset for	-	81
deferred income taxes related to the regulation of facilities		
effective July 1, 2014	861	000
Changes during the year:	001	883
Decrease in deferred income tax liabilities on temporary differences	(52)	(17)
related to regulated operations, including facilities prescribed for regulation	(32)	(17)
effective in 2014		
Decrease in deferred income tax liabilities resulting from the regulatory	(17)	(5)
asset for deferred income taxes, including for facilities prescribed for	<b>、</b>	( )
regulation effective in 2014		
Balance as at December 31	792	861

The tax benefit associated with an income tax position is recognized only when it is more likely than not that such a position will be sustained upon examination by the taxing authorities based on the technical merits of the position. The current and deferred income tax benefit is equal to the largest amount, considering possible settlement outcomes, that is greater than 50 percent likely of being realized upon settlement with the taxing authorities.

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows:

(millions of dollars)	2015	2014
Linear animal tay hanafita haginarian of year	79	01
Unrecognized tax benefits, beginning of year		91
Additions based on tax positions related to the current year	16	11
Additions for tax positions of prior years	7	12
Reductions for tax positions of prior years	(14)	(35)
Other	(16)	-
Unrecognized tax benefits, end of year	72	79

As at December 31, 2015, OPG's unrecognized tax benefits were \$72 million (2014 – \$79 million), excluding interest and penalties, all of which, if recognized, would affect OPG's effective tax rate. Changes in unrecognized tax benefits over the next 12 months cannot be predicted with certainty.

OPG recognizes interest and penalties related to unrecognized tax benefits as income tax expense. As at December 31, 2015, OPG had recorded interest on unrecognized tax benefits of \$7 million (2014 – \$6 million). OPG considers its significant tax jurisdiction to be Canada. OPG remains subject to income tax examination for years after 2011.

OPG paid \$47 million in income taxes (net of tax refunds) during 2015. The amount of tax refunds received net of income taxes paid during 2014 was \$29 million.

# 10. ACCUMULATED OTHER COMPREHENSIVE LOSS

The changes in the balance of each component of accumulated other comprehensive loss (AOCL), net of taxes, during the years ended December 31, 2015 and 2014 are as follows:

(millions of dollars)	Unrealized Gains and Losses on Cash Flow Hedges <sup>1</sup>	2015 Pension and Other Post- Employment Benefits <sup>1</sup>	Total <sup>1</sup>
AOCL, beginning of year	(117)	(379)	(496)
Net loss on cash flow hedges	(5)	-	(5)
Actuarial gain on re-measurement of liabilities for pension and other post-employment benefits	-	148	148
Amounts reclassified from AOCL	16	18	34
OCI for the year	11	166	177
AOCL, end of year	(106)	(213)	(319)

<sup>1</sup> All amounts are net of income taxes.

		2014			
(millions of dollars)	Unrealized Gains and Losses on Cash Flow Hedges <sup>1</sup>	Pension and Other Post-Employment Benefits <sup>1</sup>	Total <sup>1</sup>		
AOCL, beginning of year	(129)	(555)	(684)		
Net gain on cash flow hedges	(2)	-	(2)		
Recognition of initial pension and OPEB Regulatory Asset for amounts recorded prior to regulation of facilities, effective July 1, 2014 ( <i>Note 3</i> )	<u>-</u>	184	184		
Actuarial loss on re-measurement of liabilities for pension and other post-employment benefits	-	(35)	(35)		
Amounts reclassified from AOCL	14	27	41		
OCI for the year	12	176	188		
AOCL, end of year	(117)	(379)	(496)		

<sup>1</sup> All amounts are net of income taxes.

The significant amounts reclassified out of each component of AOCL, net of income taxes, during the years ended December 31, 2015 and 2014 are as follows:

	Amount Reclass	sified from A	DCL
(millions of dollars)	2015	2014	Statement of Income Line Item
Amortization of losses from cash flow hedges Losses Income tax recovery	18 (2)	16 (2)	Net interest expense Income tax expense
	16	14	·
Amortization of amounts related to pension and other post-employment benefits			
Actuarial losses and past service costs	25	37	See (1) below
Income tax recovery	(7)	(10)	Income tax expense
	18	27	·
Total reclassifications for the year	34	41	

<sup>1</sup> These AOCL components are included in the computation of pension and OPEB costs (see Note 11 for additional details).

# 11. PENSION AND OTHER POST-EMPLOYMENT BENEFITS

## **Fund Assets**

The OPG registered pension fund investment guidelines are stated in an approved Statement of Investment Policies and Procedures (SIPP). The SIPP is reviewed and approved by the Audit and Risk Committee of OPG's Board of Directors at least annually and includes a discussion of investment objectives and expectations, asset mix and rebalancing, and the basis for measuring the performance of the pension fund assets.

In accordance with the SIPP, investment allocation decisions are made with a view to achieve OPG's objective of meeting obligations of the plan as they come due. The pension fund assets are invested in three categories of asset classes. The first category is liability hedging assets which are intended to hedge the inflation and interest rate sensitivity of the plan liabilities. The second category is return enhancing assets which are intended to obtain higher investment returns compared to the returns expected for liability hedging assets. The third category is return diversifying strategies, which are intended to improve the overall return of the pension fund while mitigating the downside market risk.

To achieve the above objective, OPG has adopted the following target strategic asset allocation:

	Target
Asset Class	
Liability Hedging Assets	54%
Return Enhancing Assets	33%
Return on Diversifying Assets	13%

The plan may enter into derivative securities, such as interest rate swaps and forward foreign exchange contracts, for risk management purposes, where such activity is consistent with the plan's investment objectives.

#### Significant Concentrations of Risk in Fund Assets

The assets of the pension fund are diversified to limit the impact of any individual investment. The pension fund is diversified across multiple asset classes. Fixed income securities are diversified among Canadian government bonds, government agency bonds, real return bonds, corporate bonds, and an interest rate overlay hedging program, which is disclosed under pooled funds. Equity securities are diversified across Canadian, US, and non-North American stocks. There are also real estate, infrastructure, and agriculture portfolios that represent approximately nine percent of the total pension fund assets as at December 31, 2015. Investments in the above asset classes are further diversified across funds, investment managers, strategies, vintages, sectors and geographies, depending on the specific characteristics of each asset class.

Credit risk with respect to the pension fund's fixed income securities is managed by risk tolerance guidelines, which requires that fixed income securities comply with various investment constraints that ensure prudent diversification and prescribed minimum required credit rating quality. Credit risk, as it relates to the pension fund's derivatives, is managed through the use of International Swap and Derivatives Association documentation and counterparty management performed by the fund's investment managers.

## Risk Management

Risk management oversight with respect to the pension fund includes, but is not limited to, the following activities:

- Periodic asset/liability management and strategic asset allocation studies
- Monitoring of funding levels and funding ratios
- Monitoring compliance with asset allocation guidelines and investment management agreements
- Monitoring asset class performance against asset class benchmarks
- Monitoring investment manager performance against benchmarks
- Monitoring of risk tolerance guidelines

#### Expected Rate of Return on Plan Assets

The expected rate of return on plan assets is based on the fund's asset allocation, as well as the return expectations considering long-term historical risks and returns associated with each asset class within the plan portfolio. The asset management decisions consider the economic liabilities of the plan.

#### **Fair Value Measurements**

OPG is required to classify fair value measurements using a fair value hierarchy. This hierarchy groups financial instruments into three levels, based on the significance of inputs used in measuring the fair value of the assets and liabilities. Refer to Note 13 for a detailed discussion of fair value measurements and the fair value hierarchy.

The following tables present pension plan assets measured at fair value in accordance with the fair value hierarchy:

		Decembe	r 31, 2015	
(millions of dollars)	Level 1	Level 2	Level 3	Total
Cash and cash equivalents	374	_	_	374
Short-term investments		1	_	1
Fixed income				•
Corporate debt securities	-	392	_	392
Government bonds	-	3,794	_	3,794
Equities		0,704		0,104
Canadian	1,547	-	-	1,547
US	1,786	-	-	1,786
Non-North American	1,992	-	-	1,992
Pooled funds	21	147	1,878	2,046
nfrastructure		-	702	702
Real estate	-	-	402	402
Agriculture	-	-	107	107
Other	1	-	6	7
-				
	5,721	4,334	3,095	13,150 <sup>1</sup>

<sup>1</sup> The table above excludes pension fund receivables and payables.

		Decembe	r 31, 2014	
(millions of dollars)	Level 1	Level 2	Level 3	Total
Cash and cash equivalents	251	-		251
Short-term investments	-	3	-	3
Fixed income				
Corporate debt securities	-	349	-	349
Government bonds	-	1,704	-	1,704
Equities				
Canadian	1,955	-	-	1,955
US	2,016	-	-	2,016
Non-North American	2,147	-	-	2,147
Pooled funds	12	2,450	866	3,328
Infrastructure	-	-	338	338
Real estate	-	-	243	243
Agriculture	-	-	57	57
Other	-	-	5	5
	6,381	4,506	1,509	12,396 <sup>1</sup>

<sup>1</sup> The table above excludes pension fund receivables and payables.

The following table presents the changes in the fair value of financial instruments classified in Level 3:

(millions of dollars)	Pooled Funds	Infrastructure	Real Estate	Agriculture	Other	Total
Opening balance, January 1, 2014	11	208	210	57	2	488
Total realized and unrealized gains	69	37	19	-	-	125
Purchases, sales, and settlements	786	93	14	-	3	896
Closing balance, December 31, 2014	866	338	243	57	5	1,509
Total realized and unrealized gains Purchases, sales, and settlements	247 765	91 273	58 101	- 50	- 1	396 1,190
Closing balance, December 31, 2015	1,878	702	402	107	6	3,095

During the years ended December 31, 2015 and 2014, there were no transfers between Level 1 and Level 2.

# **Plan Costs and Liabilities**

Details of OPG's pension and OPEB obligations, pension fund assets and costs are presented in the following tables:

	0	red and		
	Supplementary Pension Plans			Employment efits
	2015	2014	2015	2014
Weighted Average Assumptions – Benefit Obligations at Year-End				
Rate used to discount future benefits	4.10%	4.00%	4.13%	4.03%
Salary schedule escalation rate - first six years	1.60%	2.00%	1.60%	2.00%
- thereafter	2.50%	2.50%	2.50%	2.50%
Rate of cost of living increase to pensions	2.00%	2.00%	n/a	n/a
Initial health care trend rate	n/a	n/a	6.00%	6.09%
Ultimate health care trend rate	n/a	n/a	4.33%	4.33%
Year ultimate health care trend rate reached	n/a	n/a	2030	2030
Rate of increase in disability benefits	n/a	n/a	2.00%	2.00%

	Registered and Supplementary Pension Plans			Employment efits
	2015	2014	2015	2014
Weighted Average Assumptions – Costs for the Year				
Expected return on plan assets, net of expenses	6.25%	6.25%	n/a	n/a
Rate used to discount future benefits	4.00%	4.90%	4.03%	4.91%
Salary schedule escalation rate - first six years	2.00%	2.50%	2.00%	2.50%
- thereafter	2.50%	2.50%	2.50%	2.50%
Rate of cost of living increase to pensions	2.00%	2.00%	n/a	n/a
Initial health care trend rate	n/a	n/a	6.09%	6.19%
Ultimate health care trend rate	n/a	n/a	4.33%	4.34%
Year ultimate health care trend rate reached	n/a	n/a	2030	2030
Rate of increase in disability benefits	n/a	n/a	2.00%	2.00%
Expected average remaining service life for employees (years)	12	12	13	13

	Registered Pension Plans		Supplementary Pension Plans		Other Post- Employment Benefits	
(millions of dollars)	2015	2014	2015	2014	2015	2014
Components of Cost Recognized						
Current service costs	320	238	7	8	71	64
Interest on projected benefit obligation	630	658	13	14	127	135
Expected return on plan assets, net of expenses	(717)	(628)	-	-	-	-
Amortization of net actuarial loss <sup>1</sup>	292	260	6	4	27	6
Recognition of LTD net actuarial loss (gain)	-	-	-	-	7	(3)
Costs recognized <sup>2</sup>	525	528	26	26	232	202

<sup>1</sup> The amortization of past service costs and net actuarial loss was recognized as an increase to OCI. This increase was partially offset by the impact of the Pension and OPEB Regulatory Asset discussed in Note 5.

<sup>2</sup> Excludes the impact of regulatory variance and deferral accounts discussed in Note 5.

Total benefit costs, including the impact of the Pension and OPEB Cost Variance Account, the Pension & OPEB Cash Payment Variance Account and the Pension & OPEB Cash Versus Accrual Differential Deferral Account, for the years ended December 31 are as follows:

(millions of dollars)	2015	2014
Degistered persion plane	525	500
Registered pension plans	525	528
Supplementary pension plans	26	26
Other post-employment benefits	232	202
Pension and OPEB Cost Variance Account (Note 5)	-	(254)
Pension & OPEB Cash Payment Variance Account (Note 5)	(21)	(6)
Pension & OPEB Cash Versus Accrual Differential Deferral Account (Note 5)	(279)	(36)
Pension and other post-employment benefit costs	483	460

The pension and OPEB obligations and the pension fund assets measured as at December 31 are as follows:

	Registered Pension Plans		Supplementary Pension Plans		Other Post- Employment Benefits	
(millions of dollars)	2015	2014	2015	2014	2015	2014
Charace in Plan Accests						
Change in Plan Assets	12 407	10,961				
Fair value of plan assets at beginning of year	12,407 362	364	- 24	- 16	- 94	93
Contributions by employer Contributions by employees		504 70	24	10	94	93
Actual return on plan assets, net of expenses	1,151	1,677		-	-	-
Benefit payments	(832)	(665)	(24)	- (16)	(94)	(93)
Denenii payments	(032)	(003)	(24)	(10)	(34)	(93)
Fair value of plan assets at end of year	13,160	12,407	-	-	-	-
Change in Projected Benefit Obligations						
Projected benefit obligations at beginning of year	15,669	13,422	317	289	3,143	2,719
Employer current service costs	320	238	7	8	71	64
Contributions by employees	72	70	-	-	-	-
Interest on projected benefit obligation	630	658	13	14	127	135
Benefit payments	(832)	(665)	(24)	(16)	(94)	(93)
Past service costs	-	-	-	-	5	-
Net actuarial (gain) loss	(384)	1,946	(14)	22	(64)	318
Projected benefit obligations at end of year	15,475	15,669	299	317	3,188	3,143
Funded status – deficit at end of year	(2,315)	(3,262)	(299)	(317)	(3,188)	(3,143)

The following table provides the pension and OPEB liabilities and their classification on the consolidated balance sheets as at December 31:

	•	Registered Pension Plans		Supplementary Pension Plans		Post- yment efits
(millions of dollars)	2015	2014	2015	2014	2015	2014
Current liabilities Non-current liabilities	- (2,315)	- (3,262)	(17) (282)	(9) (308)	(103) (3,085)	(93) (3,050)
Total liabilities	(2,315)	(3,262)	(299)	(317)	(3,188)	(3,143)

The accumulated benefit obligations for the registered pension plans and supplementary pension plans as at December 31, 2015 are \$14,327 million and \$267 million, respectively (2014 – \$14,333 million and \$274 million, respectively). The accumulated benefit obligation differs from the projected benefit obligation in that the accumulated benefit obligation about future compensation levels.

The following table provides the components of OPG's OCI related to pension and OPEB plans and the offsetting Pension and OPEB Regulatory Asset as discussed in Note 5 for the years ended December 31, on a pre-tax basis:

	Registered Pension Plans		Supplementary Pension Plans		Other Post- Employment Benefits	
(millions of dollars)	2015	2014	2015	2014	2015	2014
Changes in plan assets and benefit obligations recognized in OCI						
Current year net actuarial (gain) loss	(818)	897	(14)	22	(71)	321
Current year past service costs	-	-	-	-	5	-
Amortization of net actuarial loss	(292)	(260)	(6)	(4)	(27)	(6)
Total (increase) decrease in OCI Less: (decrease) increase in Pension and OPEB Regulatory Asset, excluding initial regulatory asset related to facilities prescribed for rate regulation beginning in 2014 (Note 5)	(1,110) (916)	637 652	(20) (15)	18 19	(93) (70)	315 289
Less: Recognition of initial Pension and OPEB Regulatory Asset related to facilities prescribed for rate regulation beginning in 2014 ( <i>Note 3</i> )		219		5		21
Net (increase) decrease in OCI (pre-tax)	(194)	(234)	(5)	(6)	(23)	5

The following table provides the components of OPG's AOCL and the offsetting Pension and OPEB Regulatory Asset that have not yet been recognized as components of benefit costs as at December 31, on a pre-tax basis:

	Registered Pension Plans		Supplementary Pension Plans		Other Post- Employment Benefits	
(millions of dollars)	2015	2014	2015	2014	2015	2014
Unamortized amounts recognized in AOCL						
Past service costs	-	-	-	-	6	1
Net actuarial loss	3,023	4,133	77	97	540	638
Total recognized in AOCL	3,023	4,133	77	97	546	639
Less: Pension and OPEB Regulatory Asset	2,786	3,702	73	88	503	573
(Note 5)						
Net recognized in AOCL (pre-tax)	237	431	4	9	43	66

The following table provides the components of OPG's AOCI and the offsetting Pension and OPEB Regulatory Asset as at December 31 (included in the table above) that are expected to be amortized as components of benefit costs and recognized as increases to OCI and reductions in the Pension and OPEB Regulatory Asset, in 2016, on a pre-tax basis:

(millions of dollars)	Registered Pension Plans	Supplementary Pension Plans	Other Post- Employment Benefits
Past service costs	-	-	1
Net actuarial loss	192	4	19
Total increase in AOCI	192	4	20
Less: Estimated decrease in Pension and OPEB Regulatory Asset	177	4	18
Net increase in AOCI (pre-tax)	15	-	2

Based on the most recently filed actuarial valuation, for funding purposes, of the OPG registered pension plan, as at January 1, 2014, there was an unfunded liability on a going-concern basis of \$1,143 million and a deficiency on a wind-up basis of \$7,034 million. The funded status to be determined in the next filed funding valuation, which must have an effective date no later than January 1, 2017, could be significantly different. For 2016, OPG's required contribution to its registered pension plan is expected to be \$357 million. The amount of OPG's additional, voluntary contribution, if any, is revisited from time to time. OPG will continue to assess the requirements for contributions to the pension plan.

The supplementary pension plans are not funded, but are secured by Letters of Credit totalling \$345 million as at December 31, 2015 (2014 – \$310 million).

Estimated future benefit payments to participants in the pension and OPEB plans based on the assumptions used to measure the benefit obligations as at December 31, 2015 are as follows:

(millions of dollars)	Registered Pension Plans	Supplementary Pension Plans	Other Post- Employment Benefits
2016	661	18	103
2017	664	19	107
2018	750	19	111
2019	726	19	115
2020	764	20	121
2021 through 2025	4,099	105	676

A one percent increase or decrease in the health care trend rate would result in an increase in the current service and interest components of the 2015 OPEB costs of \$45 million (2014 – \$42 million) or a decrease in the service and interest components of the 2015 OPEB costs of \$33 million (2014 – \$31 million). A one percent increase or decrease in the health care trend rate would result in an increase in the projected OPEB obligation as at December 31, 2015 of \$584 million (2014 – \$567 million) or a decrease in the projected OPEB obligation as at December 31, 2015 of \$446 million (2014 – \$432 million).

## 12. RISK MANAGEMENT AND DERIVATIVES

OPG is exposed to risks related to changes in market interest rates on debt expected to be issued in the future and movements in foreign currency that affect its assets, liabilities, and forecasted transactions. Select derivative instruments are used to manage such risks. Derivatives are used as hedging instruments, as well as for trading purposes.

Interest rate risk is the risk that the value of assets and liabilities can change due to movements in related interest rates. Interest rate risk for OPG arises with the need to refinance existing debt and/or undertake new financing. The management of these risks includes using derivatives to hedge the exposure in accordance with corporate risk management policies. OPG periodically uses interest rate swap agreements to mitigate elements of interest rate risk exposure associated with anticipated financing.

OPG's financial results are exposed to volatility in the Canadian/US foreign exchange rate as fuels and certain supplies and services purchased for generating stations and major development projects are primarily denominated in, or tied to US dollars. OPG enters into foreign exchange derivatives and agreements with major financial institutions, when appropriate, in order to manage the Company's exposure to foreign currency movements.

The majority of OPG's revenues are derived from sales through the IESO-administered spot market. Market participants in the IESO spot market provide collateral in accordance with the IESO prudential support requirements to cover funds that they might owe to the market. Although the credit exposure to the IESO represents a significant portion of OPG's accounts receivable, the Company's management accepts this risk due to the IESO's primary role in the Ontario electricity market. The remaining receivables exposure is to a diverse group of generally high quality counterparties. OPG's allowance for doubtful accounts as at December 31, 2015 was less than \$1 million.

OPG's fair value derivatives totalled a net liability of \$2 million as at December 31, 2015 (2014 – \$291 million). As at December 31, 2014, the fair value derivatives included a liability of \$302 million for the derivative embedded in the Bruce Lease related to the conditional reduction in OPG's lease revenue in the future, and net assets of \$11 million comprising other derivative instruments. The liability for the derivative embedded in the Bruce Lease was presented on the balance sheet under long-term accounts payable and accrued charges. Amendments to the Bruce Lease in December 2015 removed the provision of the agreement giving rise to the embedded derivative, which resulted in the

reversal of the derivative liability of approximately \$299 million in December 2015, with a corresponding reduction in the regulatory asset for the Bruce Lease Net Revenues Variance Account. The December 2015 amendments to the Bruce Lease are also discussed in Note 3 under the heading, *Changes in Accounting Policies and Estimates*.

The following table shows the amount related to derivatives recorded in AOCL and income for the years ended December 31:

(millions of dollars)	2015	2014
Cash flow hedges (recorded in AOCL)		
Losses in OCI	(7)	(3)
Reclassification of losses to net interest expense	20	19
Reclassification of gains to fuel expense	(2)	(3)
Commodity derivatives (recorded in income)		
Realized losses in revenue	(16)	(11)
Unrealized (losses) gains in revenue	(7)	9
Embedded derivative (recorded in income)		
Unrealized gains in revenue <sup>1</sup>	225	44

<sup>1</sup> Excludes the impact of the Bruce Lease Net Revenues Variance Account.

Existing net losses of \$21 million deferred in AOCL as at December 31, 2015 are expected to be reclassified to net income within the next 12 months.

# 13. FAIR VALUE MEASUREMENTS

OPG is required to classify fair value measurements using a fair value hierarchy. This hierarchy groups financial assets and liabilities into three levels, based on the inputs used in measuring the fair value of the financial assets and liabilities. The fair value hierarchy has the following levels:

- Level 1: Valuation of inputs is based on unadjusted quoted market prices observed in active markets for identical assets or liabilities.
- Level 2: Valuation is based on inputs other than quoted prices under Level 1 that are observable for the asset or liability, either directly or indirectly.
- Level 3: Valuation is based on inputs for the asset or liability that are not based on observable market data.

The fair value of financial instruments traded in active markets is based on quoted market prices at the consolidated balance sheet dates. A market is regarded as active if quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service, or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis. The quoted market price used for financial assets held by OPG is the current bid price. These instruments are included in Level 1 and are comprised primarily of equity investments and fund investments.

For financial instruments for which quoted market prices are not directly available, fair values are estimated using forward price curves developed from observable market prices or rates. The estimation of fair value may include the use of valuation techniques or models, based wherever possible on assumptions supported by observable market prices or rates prevailing at the consolidated balance sheet dates. This is the case for over-the-counter derivatives and securities, which include energy commodity derivatives, foreign exchange derivatives, interest rate swap derivatives, and fund investments. Pooled fund investments are valued at the unit values supplied by the pooled fund administrators. The unit values represent the underlying net assets at fair values, determined using closing market prices. Valuation models use general assumptions and market data and therefore do not reflect the specific risks and other factors that would affect a particular instrument's fair value. The methodologies used for calculating the fair

value adjustments are reviewed on an ongoing basis to ensure that they remain appropriate. If all significant inputs required to fair value an instrument are observable, the instrument is included in Level 2.

If one or more of the significant inputs is not based on observable market data, the instrument is included in Level 3. Specific valuation techniques are used to value these instruments. Significant Level 3 inputs include: recent comparable transactions, comparable benchmark information, bid/ask spread of similar transactions, and other relevant factors.

Transfers into, out of, or between levels are deemed to have occurred on the date of the event or change in circumstances that caused the transfer to occur.

The Company is required to determine the fair value of all its financial instruments. The following is a summary of OPG's financial instruments as at December 31:

		air Iue	Carrying Value <sup>1</sup>		
(millions of dollars)	2015	2014	2015	2014	Balance Sheet Line Item
Nuclear fixed asset removal and nuclear waste management funds (includes current portion)	15,136	14,379	15,136	14,379	Nuclear fixed asset removal and nuclear waste management funds
Payable related to cash flow hedges	(56)	(63)	(56)	(63)	Long-term accounts payable and accrued charges
Derivative embedded in the Bruce Lease	-	(302)	-	(302)	Long-term accounts payable and accrued charges
Long-term debt (includes current portion)	(5,978)	(6,326)	(5,472)	(5,730)	Long-term debt
Other financial instruments	6	19	6	19	Various

<sup>1</sup> The carrying values of other financial instruments included in cash and cash equivalents, receivables from related parties, other short-term assets, short-term debt, and accounts payable and accrued charges approximate their fair values due to the immediate or short-term maturity of these financial instruments.

The fair value of long-term debt instruments is determined based on a conventional pricing model, which is a function of future cash flows, the current market yield curve and term to maturity. These inputs are considered Level 2 inputs.

The following tables present assets and liabilities measured at fair value in accordance with the fair value hierarchy:

		Decembe	r 31, 2015	
(millions of dollars)	Level 1	Level 2	Level 3	Total
Assets				
Decommissioning Fund	3,200	2,733	616	6,549
Used Fuel Fund	681	7,787	119	8,587
Other financial instruments	14	4	16	34
Total	3,895	10,524	751	15,170
Liabilities				
Other financial instruments	(18)	(8)	(2)	(28)
Total	(18)	(8)	(2)	(28)
Net assets	3,877	10,516	749	15,142

		December	<sup>·</sup> 31, 2014	
(millions of dollars)	Level 1	Level 2	Level 3	Total
Assets				
Decommissioning Fund	3,069	2,787	390	6,246
Used Fuel Fund	617	7,444	72	8,133
Other financial instruments	4	5	16	25
Total	3,690	10,236	478	14,404
Liabilities				
Derivative embedded in the Bruce Lease	-	-	(302)	(302)
Other financial instruments	(3)	(3)	-	(6)
Total	(3)	(3)	(302)	(308)
Net assets	3,687	10,233	176	14,096

During the year ended December 31, 2015, there were no transfers between Level 1 and Level 2. In addition, there were no transfers into and out of Level 3.

The following table presents the changes in OPG's assets and liabilities measured at fair value based on Level 3:

(millions of dollars)	Decom- missioning Fund	Used Fuel Fund	Derivative Embedded in the Bruce Lease <sup>1</sup>	Other Financial Instruments
Opening balance, January 1, 2014	247	42	(346)	12
Unrealized gains included in earnings on nuclear fixed asset removal and nuclear waste management funds <sup>2</sup>	20	4	-	-
Unrealized gains included in revenue	-	-	44	2
Realized gains (losses) included in revenue	1	-	-	(11)
Purchases	148	28	-	13
Sales	(12)	(2)	-	-
Settlements	(14)	-	-	-
Closing balance, December 31, 2014	390	72	(302)	16
Unrealized gains included in earnings on nuclear fixed asset removal and nuclear waste management funds <sup>2</sup>	58	10	-	-
Unrealized gains (losses) included in revenue	-	-	225	(4)
Realized gains (losses) included in revenue	2	1	-	(16)
Purchases	191	36	-	18
Sales	(12)	(3)	-	-
Settlements	(13)	3	77	-
Closing balance, December 31, 2015	616	119	-	14

<sup>1</sup> As a result of the December 2015 amendment to the Bruce Lease, discussed under the heading, *Changes in Accounting Policies and Estimates*, the term of the agreement specifying the conditional reductions to lease revenue in the future was removed. Accordingly, the derivative liability embedded in the Bruce Lease was reversed in 2015.

<sup>2</sup> Total gains (losses) exclude the impact of the Bruce Lease Net Revenues Variance Account.

## **Decommissioning Fund and Used Fuel Fund**

Nuclear Funds investments classified as Level 3 consist of infrastructure, real estate, and agriculture investments within the alternative investment portfolio. The fair value of the investments within the Nuclear Funds' alternative investment portfolio is determined using acceptable industry valuation methods, such as recent arm's length market transactions, reference to comparable securities of issuers with similar credit ratings, discounted cash flow analyses,

third-party independent appraisals, valuation multiples, or other valuation methods. Any control, size, liquidity or other discounts or premiums on the investments are considered in the determination of fair value.

The process of valuing investments for which no published market price exists is based on inherent uncertainties and the resulting values may differ from values that would have been used had a ready market existed for the investments. The values may also differ from the prices at which the investments may be sold.

The following are the classes of investments within the Nuclear Funds that are reported on the basis of net asset value as at December 31, 2015:

(millions of dollars except where noted)	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice
Infrastructure	979	385	n/a	n/a
Real Estate	600	226	n/a	n/a
Agriculture	41	160	n/a	n/a
Pooled Funds				
Short-term Investments	5	n/a	Daily	1 - 5 Days
Fixed Income	609	n/a	Daily	1 - 5 Days
Equity	698	n/a	Daily	1 - 5 Days
Total	2,932	771		

The fair value of the above investments is classified as either Level 2 or Level 3.

#### Infrastructure

This class includes investments in funds whose investment objective is to generate a combination of long-term capital appreciation and current income generally through investments such as energy, transportation and utilities. The fair values of investments in this class have been estimated using the Nuclear Funds' ownership interest in partners' capital and/or underlying investments held by subsidiaries of an infrastructure fund. The investments in the respective infrastructure funds are not redeemable. However, the Nuclear Funds may transfer any of its partnership interests/shares to another party, as stipulated in the partnership agreements and/or shareholders' agreements. Distributions from each infrastructure fund will be received based on the operations of the underlying investments and/or as the underlying investments of the infrastructure funds are liquidated. It is not possible to estimate when the underlying assets of the infrastructure funds will be liquidated. However, the infrastructure funds have a maturity end period ranging from 2019 to 2025.

## Real Estate

This class includes investment in institutional-grade real estate property located in Canada. The investment objective is to provide a stable level of income with the opportunity for long-term capital appreciation. The fair values of the investments in this class have been estimated using the net asset value of the Nuclear Funds' ownership interest in these investments. The partnership investments are not redeemable. However, the Nuclear Funds may transfer any of their partnership interests to another party, as stipulated in the partnership agreement, with prior written consent of the other limited partners. For investments in private real estate corporations, shares may be redeemed through a pre-established redemption process. It is not possible to estimate when the underlying assets in this class will be liquidated.

## Agriculture

This class includes a diversified portfolio of global farmland and timberland investments. The investment objective is to provide a differentiated return source, income yield, and inflation protection. The fair values of the investments in this class have been estimated using the net asset value of the Nuclear Funds' ownership interest in these

investments. The investments are not redeemable. However, the Nuclear Funds may transfer any of their interests to another party, as stipulated in the shareholders' agreement, with prior written consent of the other shareholders.

#### Pooled Funds

This class represents investments in pooled funds, which primarily include a diversified portfolio of fixed income securities, issued mainly by Canadian corporations and diversified portfolios of Emerging Market listed equity. The investment objective of the pooled funds is to achieve capital appreciation and income through professionally managed portfolios. The fair value of the investments in this class has been estimated using the net asset value per share of the investments. There are no significant restrictions on the ability to sell investments in this class.

## 14. COMMON SHARES

As at December 31, 2015 and 2014, OPG had 256,300,010 common shares issued and outstanding at a stated value of \$5,126 million. OPG is authorized to issue an unlimited number of common shares without nominal or par value. Any issue of new shares is subject to the consent of OPG's shareholder.

## **15. COMMITMENTS AND CONTINGENCIES**

#### Litigation

On August 9, 2006, a Notice of Action and Statement of Claim filed with the Ontario Superior Court of Justice in the amount of \$500 million was served against OPG and Bruce Power by British Energy Limited and British Energy International Holdings Limited (together British Energy). The action is for contribution and indemnity of any amounts British Energy was liable for in an arbitration against it by some of the owners of Bruce Power regarding an alleged breach of British Energy's representations and warranties to the claimants when they purchased British Energy's interest in Bruce Power (the Arbitration). Both the action and the Arbitration relate to corrosion to a steam generator unit discovered after OPG leased the Bruce nuclear generating stations to Bruce Power.

In 2012, the arbitrator found that British Energy was liable to the claimants for some of the damages they claimed. The final settlement amount was valued by British Energy at \$71 million. In September 2014, British Energy amended its Statement of Claim (Amended Claim) to reduce the claim amount to \$100 million to reflect that the purchasers of British Energy's interest in Bruce Power did not receive the full damages they originally claimed in the Arbitration. British Energy also added an allegation to its Amended Claim that OPG breached a covenant to maintain the steam generator between the time of the initial agreement to lease and the effective date of the lease in accordance with "Good Utility Practices".

Various other legal proceedings are pending against OPG or its subsidiaries covering a wide range of matters that arise in the ordinary course of its business activities.

Each of these matters is subject to various uncertainties. Some of these matters may be resolved unfavourably. While it is not possible to determine the ultimate outcome of the various pending actions, it is the Company's belief that their resolution is not likely to have a material adverse impact on its financial position.

## **Guarantees**

The Company and its joint venture partners have jointly guaranteed the financial performance of jointly owned entities related primarily to the payment of liabilities. As at December 31, 2015, the total amount of guarantees OPG provided to these entities was \$81 million (2014 – \$78 million). OPG may terminate some of these guarantees within a short time frame by providing written notice to the counterparties at any time. Other guarantees have terms ending

between 2019 and 2029. As at December 31, 2015, the potential impact of the fair value of these guarantees to income has been estimated to be negligible and OPG does not expect to make any payments associated with these guarantees.

## **Contractual and Commercial Commitments**

OPG's contractual obligations as at December 31, 2015, are as follows:

(millions of dollars)	2016	2017	2018	2019	2020	Thereafter	Total
Fuel supply agreements	175	173	163	97	65	110	783
Contributions under the ONFA <sup>1</sup>	150	163	193	288	133	2,285	3,212
Contributions to the OPG registered pension plan <sup>2</sup>	357	-	-	-	-	-	357
Long-term debt repayment	273	1,103	398	368	663	2,667	5,472
Interest on long-term debt	261	242	186	167	145	2,275	3,276
Short-term debt repayment	225	-	-	-	-	-	225
Commitments related to Darlington Refurbishment project <sup>3</sup>	284	-	-	-	-	-	284
Commitments related to Peter Sutherland Sr. GS	128	38	-	-	-	-	166
Operating licence	41	43	37	23	24	142	310
Operating lease obligations	16	17	17	14	14	47	125
Unconditional purchase obligations	68	61	58	57	55	5	304
Accounts payable and accrued charges	1,031	4	7	-	-	19	1,061
Other	89	39	29	26	2	69	254
Total	3,098	1,883	1,088	1,040	1,101	7,619	15,829

Contributions under the ONFA are based on the 2012 ONFA Reference Plan contribution schedule approved in 2012. The updated ONFA Reference Plan is expected to be effective January 1, 2017.

<sup>2</sup> The pension contributions include ongoing funding requirements and additional funding requirements towards the deficit, in accordance with the actuarial valuation of the OPG registered pension plan as at January 1, 2014. The next actuarial valuation of the OPG registered pension plan as at January 1, 2017. The pension contributions are affected by various factors including market performance, changes in actuarial assumptions, plan experience, changes in the pension regulatory environment, and the timing of funding valuations. Funding requirements after 2016 are excluded due to significant variability in the assumptions required to project the timing of future cash flows. The amount of OPG's additional, voluntary contribution, if any, is revisited from time to time.

<sup>3</sup> Estimated currently committed costs to close the project, including demobilization of project staff and cancellation of existing contracts and material orders.

Contractual and commercial commitments as noted exclude certain purchase orders, as they represent purchase authorizations rather than legally binding contracts, and are subject to change without significant penalties.

#### Lease Commitments

The Company leases the Bruce A and Bruce B nuclear generating stations to Bruce Power. Under the lease, as amended in December 2015, Bruce Power has options to renew the lease up to the end of 2064. As per *Ontario Regulation 53/05* pursuant to the *Ontario Energy Board Act, 1998*, the difference between OPG's revenues, including lease revenues, and costs, including depreciation expense, associated with its ownership of the Bruce A and B nuclear generating stations is included in the determination of OPG's nuclear regulated prices established by the OEB. These revenues and costs are determined on the basis of the manner in which they are recognized in OPG's consolidated financial statements. As the assets on lease to Bruce Power are not prescribed facilities under *Ontario Regulation 53/05*, the net book value of the assets is not included in the regulated rate base.

During 2015, OPG recorded lease revenue related to the Bruce generating stations of \$185 million (2014 – \$258 million), which included supplemental rent from Bruce Power of \$134 million (2014 – \$207 million). The amount of supplemental rent shown in 2015 was net of a contractually required rebate of \$77 million. The net book value of

property, plant and equipment on lease to Bruce Power as at December 31, 2015 was \$4,400 million (2014 – \$1,755 million).

## **Collective Bargaining Agreements**

As at December 31, 2015, the Power Workers' Union (PWU) represented approximately 5,300 OPG regular employees or approximately 57 percent of OPG's regular workforce. The previous collective agreement between OPG and the PWU expired on March 31, 2015. In May 2015, the parties agreed to renew the collective agreement for a three-year term, expiring on March 31, 2018. The changes to the collective agreement include increases to employee pension plan contributions in each year of the agreement.

As at December 31, 2015, the Society of Energy Professionals (The Society) represented approximately 2,950 OPG employees or approximately 32 percent of OPG's regular workforce. The governing collective agreement between OPG and The Society expired on December 31, 2015. In November 2015, the parties agreed to renew the collective agreement for a three-year term, expiring on December 31, 2018. The changes to the collective agreement include increases to employee pension plan contributions in each of the first two years of the agreement.

The changes to both collective agreements will provide existing employees with lump sum payments for each of the first two years of the contract and eligibility to annually receive shares in Hydro One Inc. (Hydro One) for up to 15 years starting in year three of the contract, as long as these employees continue to make contributions to the OPG pension plan. The contract term was conditional on the initial public offering of Hydro One shares, which occurred in November 2015.

## Information Technology Services Contract

OPG conducted a competitive bid process for outsourced information technology services over the 2014 and 2015 period, issuing a Request For Proposal to a number of qualified suppliers. In October 2015, following the competitive bid process, a five-year agreement was awarded effective February 2016. The estimated value of the new contract is approximately \$300 million over the five-year period.

# **16. BUSINESS SEGMENTS**

OPG has the following five reportable business segments:

- Regulated Nuclear Generation
- Regulated Nuclear Waste Management
- Regulated Hydroelectric
- Contracted Generation Portfolio
- Services, Trading, and Other Non-Generation

# **Regulated – Nuclear Generation Segment**

The Regulated – Nuclear Generation business segment operates in Ontario, generating and selling electricity from the Pickering GS and the Darlington GS, both owned and operated by OPG. The business segment also includes revenue under the terms of a lease arrangement and related agreements with Bruce Power related to the Bruce nuclear generating stations. This revenue includes lease revenue, fees for nuclear waste management, and revenue from heavy water sales and detritiation services. The segment also earns revenue from isotope sales and ancillary services supplied by OPG-operated nuclear stations. Ancillary revenues are earned through voltage control and reactive support. Revenues under the agreements with Bruce Power and from isotope sales and ancillary services are included by the OEB in the determination of the regulated prices for production from OPG's nuclear facilities, which has had the effect of reducing these regulated prices.

## **Regulated – Nuclear Waste Management Segment**

OPG's Regulated – Nuclear Waste Management segment reports the results of the Company's operations associated with the management of nuclear used fuel and L&ILW, the decommissioning of OPG's nuclear generating stations including the stations on lease to Bruce Power, the management of the Nuclear Funds established pursuant to the ONFA with the Province, and related activities including the inspection and maintenance of the waste storage facilities. Accordingly, accretion expense on the Nuclear Liabilities and earnings from the Nuclear Funds are reported under this segment.

As the nuclear generating stations operate over time, OPG incurs incremental costs related to used nuclear fuel and low and intermediate level wastes, which increase the Nuclear Liabilities. OPG charges these incremental costs to current operations in the Regulated – Nuclear Generation segment to reflect the cost of producing energy and earning revenue under the Bruce Lease and related agreements. Since the incremental costs increase the Nuclear Liabilities in the Regulated – Nuclear Waste Management segment, OPG records an inter-segment charge between the Regulated – Nuclear Generation and the Regulated – Nuclear Waste Management segments. The impact of the inter-segment charge is eliminated in OPG's consolidated statements of income and balance sheets.

The Regulated – Nuclear Waste Management segment is considered rate regulated because the costs associated with the Nuclear Liabilities are included by the OEB in the determination of regulated prices for production from OPG's Pickering and Darlington nuclear generating stations.

#### **Regulated – Hydroelectric Segment**

OPG's Regulated – Hydroelectric business segment operates in Ontario, generating and selling electricity from most of the Company's hydroelectric generating stations. The business segment includes the results of the Sir Adam Beck 1, 2 and Pump generating stations, the DeCew Falls 1 and 2 generating stations, the R.H. Saunders GS and the 48 hydroelectric stations prescribed for rate regulation effective in 2014. In addition, the business segment includes ancillary revenues and other revenues from OPG's regulated hydroelectric stations. Ancillary revenues are earned through offering available generating capacity as operating reserve and through the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services.

#### **Contracted Generation Portfolio Segment**

The Contracted Generation Portfolio business segment operates in Ontario, generating and selling electricity from the Company's generating stations that are not prescribed for rate regulation. The segment primarily includes generating facilities that are under an ESA with the IESO or other long-term contracts.

The Contracted Generation Portfolio segment also includes OPG's share of equity income from its 50 percent ownership interests in the PEC and Brighton Beach stations. OPG's share of the in-service generating capacity and generation volume from its interests in the PEC and Brighton Beach stations are also included in this segment.

The business segment also includes ancillary revenues and other revenues from the stations included in the segment, which are earned through offering available generating capacity as operating reserve, and the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services.

#### Services, Trading, and Other Non-Generation Segment

The Services, Trading, and Other Non-Generation segment is a non-generation segment that is not subject to rate regulation. It includes the revenue and expenses related to OPG's trading and other non-hedging activities. As part of these activities, OPG transacts with counterparties in Ontario and neighbouring energy markets in predominantly short-term trading activities of typically one year or less in duration. These activities relate to electricity that is purchased and sold at the Ontario border, financial energy trades, financial risk management energy product

revenues, and sales of energy-related products. In addition, OPG has a wholly owned trading subsidiary that transacts solely in the US market. The results of this subsidiary are reported in this segment. All contracts that are not designated as hedges are recorded as assets or liabilities at fair value on the consolidated balance sheets with changes in fair value recorded in the revenue of this segment. In addition, the segment includes revenue from real estate rentals and other unregulated service revenues, and activities related to the Lambton GS and the Nanticoke GS that were shut down at the end of 2013.

OM&A expenses of the generation business segments include an inter-segment service fee for the use of certain property, plant and equipment, and intangible assets held within the Services, Trading and Other Non-Generation segment. The total service fee is recorded as a reduction to the segment's OM&A expenses.

The service fee included in OM&A expenses by segment in 2015 and 2014 was as follows:

(millions of dollars)	2015	2014
Regulated – Nuclear Generation	33	23
Regulated – Hydroelectric	6	6
Contracted Generation Portfolio	4	3
Services, Trading, and Other Non-Generation	(43)	(32)

Segment (Loss)	Regulated Unregulated						
Income for the		Nuclear			Services,		
Year Ended		Waste		Contracted	Trading, and		
December 31, 2015	Nuclear	Manage-	Hydro-	Generation	Other Non-		
(millions of dollars)	Generation	ment	electric	Portfolio	Generation	Elimination	Total
Revenue	2 245	122	4 640	535	73	(440)	E 476
	3,245 301	122	1,619 345		2	(118)	5,476
Fuel expense		-		39		-	687
Gross margin	2,944	122	1,274	496	71	(118)	4,789
Operations,	2,200	132	338	183	48	(118)	2,783
maintenance and							
administration							
Depreciation and	717	-	282	72	29	-	1,100
amortization							
Accretion on fixed	-	880	-	8	7	-	895
asset removal and							
nuclear waste							
management							
liabilities							
Earnings on nuclear	-	(704)	-	-	-	-	(704)
fixed asset removal		. ,					. ,
and nuclear waste							
management funds							
Income from	-	-	-	(39)	-	-	(39)
investments subject				(00)			(00)
to significant influence							
Property taxes	26	-	1	7	11	-	45
Restructuring	-	_			6	_	
Other loss	3	-	3	1	7	-	14
(Loss) income before	-		•	•	•		••
interest, income							
taxes, and							
extraordinary item	(2)	(186)	650	264	(37)	_	689
CALLADI UIII di y ILEIII	(4)	(100)	0.00	204	(37)		003

Segment Income (Loss) for the		Regulated Nuclear		Unre	gulated Services,		
Year Ended December 31, 2014	Nuclear	Waste Manage-	Hydro-	Contracted Generation	Trading, and Other Non-		
(millions of dollars)	Generation	ment	electric	Portfolio	Generation	Elimination	Total
Revenue	3,015	121	1,417	329	197	(116)	4,963
Fuel expense	258	-	343	37	3	-	641
Gross margin	2,757	121	1,074	292	194	(116)	4,322
Operations, maintenance and administration	1,983	129	325	175	119	(116)	2,615
Depreciation and amortization	529	-	167	38	20	-	754
Accretion on fixed asset removal and nuclear waste management liabilities	-	782	-	8	7	-	797
Earnings on nuclear fixed asset removal and nuclear waste management funds	-	(714)	-	-	-	-	(714)
Regulatory disallowance related to the Niagara Tunnel project	-	-	77	-	-	-	77
Income from investments subject to significant influence	-	-	-	(41)	-	-	(41)
Property taxes	28	-	1	(1)	4	-	32
Restructuring	-	-	-	8	10	-	18
Other loss (income)	-	-	2	(6)	1	-	(3)
Income (loss) before interest, income taxes, and							
extraordinary item	217	(76)	502	111	33	-	787

Selected Consolidated Balance Sheet Information as at December 31, 2015		Regulated Nuclear Waste		Unreg Contracted	gulated Services, Trading, and	
,,,	Nuclear	Manage-	Hydro-	Generation	Other Non-	
(millions of dollars)	Generation	ment	electric	Portfolio	Generation	Total
Segment property, plant and equipment in-service, net	6,972	-	7,413	3,319	324	18,028
Segment construction in progress	2,290	-	98	141	38	2,567
Segment property, plant and equipment, net	9,262	-	7,511	3,460	362	20,595
Segment intangible assets in-service, net	8	-	1	3	58	70
Segment development in progress	-	-	4	-	24	28
Segment intangible assets, net	8	-	5	3	82	98
Segment fuel inventory	304	-	-	40	-	344
Segment materials and supplies inventory, net: Current	95		_	1		96
Long-term	333	-	1	3	-	337
Nuclear fixed asset removal and nuclear waste management funds (current and non-current portions)	-	15,136	-	-	-	15,136
Fixed asset removal and nuclear waste management liabilities	-	(19,792)	-	(163)	(214)	(20,169)

Selected Consolidated		Regulated		Unreg	gulated	
Balance Sheet Information as at December 31, 2014	Nuclear	Nuclear Waste Manage-	Hydro-	Contracted Generation	Services, Trading, and Other Non-	
(millions of dollars)	Generation	ment	electric	Portfolio	Generation	Total
Segment property, plant and equipment in-service, net	4,679	-	7,483	3,267	338	15,767
Segment construction in progress	1,652	-	86	35	53	1,826
Segment property, plant and equipment, net	6,331	-	7,569	3,302	391	17,593
Segment intangible assets in-service, net	11	-	1	4	14	30
Segment development in progress	2	-	1	-	43	46
Segment intangible assets, net	13	-	2	4	57	76
Segment fuel inventory	298	-	-	36	-	334
Segment materials and supplies inventory, net:						
Current	93	-	-	1	-	94
Long-term	332	-	1	5	-	338
Nuclear fixed asset removal and nuclear waste management funds (current and non-current portions)	-	14,379	-	-	-	14,379
Fixed asset removal and nuclear waste management liabilities	-	(16,663)	-	(154)	(211)	(17,028)

Selected Consolidated Cash Flow Information		Regulated		Unreç		
(millions of dollars)	Nuclear Generation	Nuclear Waste Management	Hydro- electric	Contracted Generation Portfolio	Trading, and Other Non- Generation	Total
Year ended December 31, 2015 Investment in property, plant and equipment, and intangible assets	1,023	-	86	222	45	1,376
Year ended December 31, 2014 Investment in property, plant and equipment, and intangible assets	991	-	84	423	47	1,545

# 17. NET CHANGES IN NON-CASH WORKING CAPITAL BALANCES

(millions of dollars)	2015	2014
Receivables from related parties	(63)	(80)
Other accounts receivable and prepaid expenses	(47)	15
Fuel inventory	(10)	56
Income taxes payable/recoverable	42	75
Materials and supplies	(2)	1
Accounts payable and accrued charges	(20)	145
	(100)	212

## **18. RELATED PARTY TRANSACTIONS**

Given that the Province owns all of the shares of OPG, related parties include the Province and other entities controlled by the Province including Hydro One, the IESO, and the OEFC, and jointly controlled entities. The transactions between OPG and related parties are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties.

The related party transactions for the years ended are summarized below:

(millions of dollars)	2	2015		2014	
	Revenue	Expense	Revenue	Expense	
Hydro One					
Electricity sales	12	-	23	-	
Services	1	6	1	13	
Province of Ontario					
Decommissioning Fund excess funding	-	185	-	476	
Used Fuel Fund rate of return guarantee	-	274	-	439	
Gross revenue charges	-	121	-	123	
ONFA guarantee fee	-	8	-	8	
Pension benefits guarantee fee	-	-	-	2	
OEFC					
Gross revenue charges	-	207	-	209	
Interest expense on long-term notes	-	177	-	187	
Income taxes, net of investment tax credits	-	80	-	136	
Contingency support agreement	8	-	83	-	
IESO					
Electricity related revenue	4,903	65	4,305	75	
	4,924	1,123	4,412	1,668	

The receivable and payable balances, as at December 31, between OPG and its related parties are summarized below:

(millions of dollars)	2015	2014
Receivables from related parties		
Hydro One	1	1
IESO	531	468
OEFC	9	10
PEC	3	3
Province of Ontario	1	-
Accounts payable and accrued charges		
Hydro One	1	8
OEFC	51	63
Province of Ontario	20	3
IESO	18	-

## **19. INVESTMENTS SUBJECT TO SIGNIFICANT INFLUENCE**

Investments subject to significant influence consist of OPG's 50 percent ownership interest in the jointly controlled entities of PEC and Brighton Beach, which are accounted for using the equity method as described in Note 3. The details of the balance included in the consolidated balance sheets as at December 31 are as follows:

(millions of dollars)	2015	2014
PEC		
Current assets	14	15
Long-term assets	270	287
Current liabilities	(4)	(5)
Long-term liabilities	(5)	(4)
Brighton Beach		
Current assets	9	6
Long-term assets	177	186
Current liabilities	(15)	(13)
Long-term liabilities	(6)	(6)
Long-term debt	(104)	(118)
1		0.40
Investments subject to significant influence	336	348

# 20. RESEARCH AND DEVELOPMENT

For the year ended December 31, 2015, research and development expenses of \$50 million (2014 – \$88 million) were charged to operations.

# 21. NON-CONTROLLING INTEREST

Lower Mattagami Limited Partnership (LMLP) is an Ontario limited partnership between OPG, Amisk-oo-Skow Finance Corporation (AFC), a corporation wholly owned by the Moose Cree First Nation, and LM Extension Inc., a wholly owned subsidiary of OPG. The principal business of LMLP is the development, construction, ownership, operation and maintenance of hydroelectric generating facilities located on the Lower Mattagami River.

During 2014, all six new units constructed as part of the Lower Mattagami River project were declared in-service. Subsequent to the units' in-service dates, the AFC made contributions of \$141 million to acquire their equity interest in LMLP, through the settlement of existing liabilities, including long-term debt. As of December 31, 2015, the AFC had a 25 percent interest in LMLP. OPG consolidates the results of LMLP in its consolidated financial statements and the non-controlling interest represents the AFC's equity interest in LMLP.

Filed: 2016-05-27 EB-2016-0152 Exhibit A2-1-1 Attachment 4 Page 1 of 47

# **ONTARIO POWER GENERATION INC.**

# INTERIM CONSOLIDATED FINANCIAL STATEMENTS (unaudited)

MARCH 31, 2016



# INTERIM CONSOLIDATED STATEMENTS OF INCOME (UNAUDITED)

Three Months Ended March 31		
(millions of dollars except where noted)	2016	2015
Revenue (Note 12)	1,478	1,355
Fuel expense (Note 12)	172	157
Gross margin (Note 12)	1,306	1,198
Expenses (Note 12)		
Operations, maintenance and administration	686	665
Depreciation and amortization	312	196
Accretion on fixed asset removal and nuclear waste management liabilities	232	224
Earnings on nuclear fixed asset removal and nuclear waste management funds	(147)	(231)
Property taxes	12	13
Income from investments subject to significant influence	(8)	(11)
	1,087	856
Income before other gains, interest, and income taxes	219	342
Other gains (Note 2)	(23)	-
Income before interest and income taxes	242	342
Net interest expense (Note 5)	33	47
	55	
Income before income taxes	209	295
Income tax expense	81	56
Net income	128	239
Net income attributable to the Shareholder	123	234
Net income attributable to non-controlling interest	5	5
	5	5
Basic and diluted net income per common share (dollars)	0.48	0.91
Common shares outstanding (millions)	256.3	256.3

# INTERIM CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (UNAUDITED)

Three Months Ended March 31		
(millions of dollars)	2016	2015
Net income	128	239
Other comprehensive income, net of income taxes (Note 7)		
Net gain on derivatives designated as cash flow hedges	-	1
Reclassification to income of losses from cash flow hedges <sup>1</sup>	4	3
Reclassification to income of amounts related to pension and other post-employment benefits <sup>1</sup>	3	5
Other comprehensive income for the period	7	9
Comprehensive income	135	248
Comprehensive income attributable to the Shareholder	130	243
Comprehensive income attributable to non-controlling interest	5	5

<sup>1</sup> Net of income tax expenses of \$1 million for the three months ended March 31, 2016 and 2015.

# INTERIM CONSOLIDATED STATEMENTS OF CASH FLOWS (UNAUDITED)

Three Months Ended March 31 (millions of dollars)	2016	2015
	2010	2015
Operating activities		
Net income	128	239
Adjust for non-cash items:		
Depreciation and amortization	312	196
Accretion on fixed asset removal and nuclear waste management liabilities	232	224
Earnings on nuclear fixed asset removal and nuclear waste management funds	(147)	(231)
Pension and other post-employment benefit costs (Note 8)	117	120
Mark-to-market on derivative instruments	3	44
Provision for used nuclear fuel and low and intermediate level waste	33	29
Regulatory assets and liabilities	(12)	(28)
Provision for materials and supplies	4	7
Other gains (Note 2)	(23)	-
Other	(3)	(13)
	644	587
Contributions to nuclear fixed asset removal and nuclear waste	(37)	(35)
management funds		
Expenditures on fixed asset removal and nuclear waste management	(58)	(46)
Reimbursement of expenditures on nuclear fixed asset removal	15	22
and nuclear waste management		
Contributions to pension funds and expenditures on other post-employment	(116)	(122)
benefits and supplementary pension plans		
Expenditures on restructuring	(2)	(6)
Net changes to other long-term assets and liabilities	42	20
Net changes to non-cash working capital balances (Note 13)	(122)	35
Cash flow provided by operating activities	366	455
Investing activities		
Proceeds from deposit note	10	-
nvestment in property, plant and equipment and intangible assets	(320)	(276)
Cash flow used in investing activities	(310)	(276)
	(0.0)	(
Financing activities		
Repayment of long-term debt	-	(300)
Distribution paid to non-controlling interest	(4)	(5)
ssuance of short-term debt	1,010	990
Repayment of short-term notes	(986)	(940)
Cash flow provided by (used in) financing activities	20	(255)
Net increase (decrease) in each and each equivalents	76	$(7\mathbf{C})$
Net increase (decrease) in cash and cash equivalents	76	(76)
Cash and cash equivalents, beginning of period	464	610
Cash and cash equivalents, end of period	540	534

# INTERIM CONSOLIDATED BALANCE SHEETS (UNAUDITED)

As at (millions of dollars)	March 31 2016	December 31 2015
Assets		
Current assets		
Cash and cash equivalents	540	464
Receivables from related parties	549	545
Other current assets	363	298
Nuclear fixed asset removal and nuclear waste management funds	15	15
Fuel inventory	333	344
Materials and supplies	95	96
Regulatory assets (Note 3)	471	628
	2,366	2,390
Property, plant and equipment	29,798	29,469
Less: accumulated depreciation	9.020	8,874
	20,778	20,595
	20,110	20,000
Intangible assets	485	476
Less: accumulated amortization	384	378
	101	98
Other assets	15,257	15,121
Nuclear fixed asset removal and nuclear waste management funds Long-term materials and supplies	336	337
Regulatory assets (Note 3)	5,304	5,240
Investments subject to significant influence (Note 14)	326	336
Other long-term assets	78	133
	21,301	21,167
	21,001	21,107
	44,546	44,250

# INTERIM CONSOLIDATED BALANCE SHEETS (UNAUDITED)

As at (millions of dollars)	March 31 2016	December 3 <sup>-</sup> 2015
Liabilities		
Current liabilities		
Accounts payable and accrued charges	1,083	1,199
Deferred revenue due within one year	12	12
Long-term debt due within one year (Note 4)	323	273
Short-term debt (Note 5)	249	225
Regulatory liabilities (Note 3)	20	26
Income tax payable	81	66
	1,768	1,801
	5 400	5 400
Long-term debt (Note 4)	5,136	5,186
Other liabilities		
Fixed asset removal and nuclear waste management liabilities (Note 6)	20,402	20,169
Pension liabilities	2,550	2,597
Other post-employment benefit liabilities	3,115	3,085
Long-term accounts payable and accrued charges	208	207
Deferred revenue	259	246
Deferred income taxes	836	880
Regulatory liabilities (Note 3)	96	34
	27,466	27,218
	27,400	27,210
Equity		
Common shares <sup>1</sup>	5,126	5,126
Retained earnings	5,221	5,098
Accumulated other comprehensive loss (Note 7)	(312)	(319)
Equity attributable to the Shareholder	10,035	9,905
Equity attributable to non-controlling interest	141	140
Total Equity	10,176	10,045
	10,170	10,040
	44,546	44,250

<sup>1</sup> 256,300,010 common shares outstanding at a stated value of \$5,126 million as at March 31, 2016 and December 31, 2015.

Commitments and Contingencies (Notes 4, 10 and 11)

# CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY (UNAUDITED)

Three Months Ended March 31		
(millions of dollars)	2016	2015
Common shares	5,126	5,126
Retained earnings		
Balance at beginning of period	5,098	4,696
Net income attributable to the Shareholder	123	234
Balance at end of period	5,221	4,930
Accumulated other comprehensive loss, net of income taxes Balance at beginning of period Other comprehensive income	(319) 7	(496) 9
Balance at end of period	(312)	(487)
Equity attributable to the Shareholder	10,035	9,569
Equity attributable to non-controlling interests		
Balance at beginning of period	140	141
Distribution to non-controlling interests	(4)	(5)
Net income attributable to non-controlling interest	5	5
Balance at end of period	141	141
Total equity	10,176	9,710

Filed: 2016-05-27 EB-2016-0152 Exhibit A2-1-1 Attachment 4 Page 8 of 47

# NOTES TO THE INTERIM CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

For the three months ended March 31, 2016 and 2015

# 1. BASIS OF PRESENTATION

These interim consolidated financial statements for the three months ended March 31, 2016 and 2015 include the accounts of Ontario Power Generation Inc. (OPG or Company) and its subsidiaries. The Company consolidates its interest in entities over which it is able to exercise control and attributes the results to its sole shareholder, the Province of Ontario (Province). Interests owned by other parties are reflected as non-controlling interest. These interim consolidated financial statements have been prepared and presented in accordance with United States generally accepted accounting principles (US GAAP) and the rules and regulations of the United States (US) Securities and Exchange Commission for interim financial statements. These interim consolidated financial statements are required by US GAAP for annual financial statements. Accordingly, they should be read in conjunction with the annual consolidated financial statements of the Company as at and for the year ended December 31, 2015. All dollar amounts are presented in Canadian dollars.

Certain of the 2015 comparative amounts have been reclassified from financial statements previously presented to conform to the 2016 interim consolidated financial statement presentation.

#### **Use of Management Estimates**

The preparation of financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the interim consolidated financial statements, and the reported amounts of revenues and expenses during the reporting periods. Management evaluates the Company's estimates on an ongoing basis based on historical experience, current conditions and assumptions believed to be reasonable at the time the assumption is made, with any adjustments recognized in the period incurred. Significant estimates are included in the determination of pension and other post-employment benefits (OPEB) liabilities, asset retirement obligations, income taxes (including deferred income taxes), contingencies, regulatory assets and liabilities, valuation of derivative instruments, depreciation and amortization, and inventories. Actual results may differ significantly from these estimates.

# 2. CHANGES IN ACCOUNTING POLICIES AND ESTIMATES

### **Recent Accounting Pronouncements**

#### Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share

In May 2015, the Financial Accounting Standards Board issued Accounting Standards Update No. 2015-07, *Fair Value Measurement (Topic 820) – Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share (or its Equivalent).* Under the new guidance, investments measured at net asset values, which have been elected under the guidance as a practical expedient for fair value, are excluded from the fair value hierarchy. Removing investments measured using the practical expedient from the fair value hierarchy is intended to eliminate the diversity in practice that currently exists with respect to the categorization of these investments. The only criterion for categorizing investments in the fair value hierarchy is the observability of the inputs. OPG has adopted the updates to Accounting Standards Codification (ASC) Topic 820, *Fair Value Measurement* for the March 31, 2016 interim consolidated financial statements. The change in disclosures required under this update are reflected in Note 10.

# **Changes in Accounting Policies and Estimates**

In January 2016, the Ontario Energy Board (OEB) issued its decision on OPG's December 2014 motion that requested the OEB to review and vary parts of its November 2014 decision, including the disallowed Niagara Tunnel project capital costs. In its January 2016 decision, the OEB reversed a portion of the November 2014 Niagara Tunnel capital cost disallowance and established a new variance account to record the revenue requirement impact of the reversed disallowance effective November 1, 2014. The November 2014 disallowance resulted in a write off of capital costs in the fourth quarter of 2014. To recognize the expected future recovery of the reversed portion of the disallowance and related revenue requirement impact to March 31, 2016, during the first quarter of 2016, OPG recorded an increase to property, plant and equipment and a corresponding gain of \$22 million, and a regulatory asset of \$2 million related to the balance in the variance account, in accordance with ASC Topic 980, *Regulated Operations*.

# 3. REGULATORY ASSETS AND LIABILITIES

The regulatory assets and liabilities recorded as at March 31, 2016 and December 31, 2015 are as follows:

(millions of dollars)	March 31 2016	December 31 2015
Pogulatory accets		
Regulatory assets Variance and deferral accounts as authorized by the OEB		
Pension and OPEB Cost Variance Account	828	865
Pension & OPEB Cash Versus Accrual Differential Deferral Account (Note 8)	349	315
Hydroelectric Surplus Baseload Generation Variance Account	155	114
Nuclear Liability Deferral Account	143	190
Bruce Lease Net Revenues Variance Account	120	95
Nuclear Deferral and Variance Over/Under Recovery Variance Account	68	82
Other variance and deferral accounts	27	53
	1,690	1,714
Pension and OPEB Regulatory Asset (Note 8)	3,312	3,362
Deferred Income Taxes	773	792
	E 775	E 969
Total regulatory assets	5,775 471	5,868 628
Less: current portion	4/1	020
Non-current regulatory assets	5,304	5,240
De sulaten e liek ilities		
Regulatory liabilities		
Variance and deferral accounts as authorized by the OEB Other variance and deferral accounts	116	60
	110	00
Total regulatory liabilities	116	60
Less: current portion	20	26
Non-current regulatory liabilities	96	34

In December 2015, as required by the OEB's previous decisions and orders, OPG applied to the OEB for an accounting order to establish a new deferral account to record the revenue requirement impact on the prescribed nuclear facilities of changes to the nuclear fixed asset removal and nuclear waste management liabilities and depreciation expense arising from the changes in the estimated useful lives of the Company's nuclear stations, for accounting purposes, effective December 31, 2015.

In March 2016, the OEB issued its final decision and order establishing the requested account, the Impact Resulting from Changes in Station-End-of-Life Dates Deferral Account, effective January 1, 2016. As at March 31, 2016, OPG recognized a regulatory liability of \$19 million related to the balance in the deferral account. Details of the changes to the estimated useful lives of OPG's nuclear generating stations that gave rise to this deferral account are found in Note 3 to the annual consolidated financial statements of the Company as at and for the year ended December 31, 2015.

As at March 31, 2016 and December 31, 2015, regulatory assets for other variance and deferral accounts included amounts for the Pension & OPEB Cash Payment Variance Account, the Hydroelectric Deferral and Variance Over/Under Recovery Variance Account, the Pickering Life Extension Depreciation Variance Account, the Nuclear Development Variance Account, and the Capacity Refurbishment Variance Account. As at March 31, 2016 and December 31, 2015, regulatory liabilities for other variance and deferral accounts included the Hydroelectric Water Conditions Variance Account, the Ancillary Services Net Revenue Variance Account, the Income and Other Taxes Variance Account, and the Hydroelectric Incentive Mechanism Variance Account.

As at March 31, 2016, regulatory assets for other variance and deferral accounts also included the Niagara Tunnel Project Pre-December 2008 Disallowance Variance Account and regulatory liabilities for other variance and deferral accounts also included the Impact Resulting from Changes in Station-End-of-Life Dates Deferral Account.

### 4. LONG-TERM DEBT

Long-term debt consists of the following:

(millions of dollars)	March 31 2016	December 31 2015
Notes payable to the Ontario Electricity Financial Corporation	3,465	3,465
UMH Energy Partnership	187	187
PSS Generating Station Limited Partnership	245	245
Lower Mattagami Energy Limited Partnership	1,575	1,575
	5,472	5,472
Less: bond issuance fees	(13)	(13)
Less: due within one year	(323)	(273)
	E 400	5 400
Long-term debt	5,136	5,186

During the first quarter of 2016, no long-term debt was repaid (three months ended March 31, 2015 - \$300 million).

### 5. SHORT-TERM DEBT AND NET INTEREST EXPENSE

OPG maintains a \$1 billion revolving committed bank credit facility, which is divided into two \$500 million multi-year term tranches, expiring in May 2020. As at March 31, 2016, there were no outstanding borrowings under the bank credit facility.

As at March 31, 2016, the Lower Mattagami Energy Limited Partnership (LME) maintained a \$500 million bank credit facility to support the funding requirements for the Lower Mattagami River project, including support for LME's commercial paper program. The facility consists of a \$300 million tranche maturing in August 2020 and a \$200 million tranche maturing in August 2016. As at March 31, 2016, there was external commercial paper of \$249 million outstanding under LME's commercial paper program (December 31, 2015 – \$225 million). There were no amounts outstanding under LME's bank credit facility as at March 31, 2016.

The following table summarizes net interest expense:

	Three Months Ended March 31	
(millions of dollars)	2016	2015
Interest on long-term debt	72	72
Interest on short-term debt	1	1
nterest income	(2)	(3)
nterest capitalized to property, plant and equipment, and intangible assets	(31)	(23)
Interest related to regulatory assets and liabilities <sup>1</sup>	(7)	-
Net interest expense	33	47

Includes interest to recognize the cost of financing related to regulatory variance and deferral accounts, as authorized by the OEB, and interest deferred in the Capacity Refurbishment Variance Account and the Bruce Lease Net Revenues Variance Account.

## 6. FIXED ASSET REMOVAL AND NUCLEAR WASTE MANAGEMENT LIABILITIES

The liabilities for fixed asset removal and nuclear waste management on a present value basis as at March 31, 2016 and December 31, 2015 consist of the following:

(millions of dollars)	March 31 2016	December 31 2015
Liability for nuclear used fuel management Liability for nuclear decommissioning and low and intermediate level waste management	12,957 7,066	12,793 6,999
Liability for non-nuclear fixed asset removal	379	377
Fixed asset removal and nuclear waste management liabilities	20,402	20,169

# 7. ACCUMULATED OTHER COMPREHENSIVE LOSS

The changes in the balance of each component of accumulated other comprehensive loss (AOCL), net of income taxes, are as follows:

(millions of dollars)	Three Months Ended March 31, 2016		
	Unrealized Gains and Losses on Cash Flow Hedges <sup>1</sup>	Pension and OPEB <sup>1</sup>	Total <sup>1</sup>
AOCL, beginning of period Amounts reclassified from AOCL	(106) 4	(213) 3	(319) 7
AOCL, end of period	(102)	(210)	(312)

<sup>1</sup> All amounts are net of income taxes.

Three Months Ended March 31, 2015 Unrealized Gains		
and Losses on Cash Flow Hedges <sup>1</sup>	Pension and OPEB <sup>1</sup>	Total <sup>1</sup>
(117)	(379)	(496)
1	-	1
3	5	8
4	5	9
(113)	(374)	(487)
	Unrealized Gains and Losses on Cash Flow Hedges <sup>1</sup> (117) 1 3 4	Unrealized Gains and Losses on Cash Flow Hedges 1Pension and OPEB 1(117)(379)1-3545

<sup>1</sup> All amounts are net of income taxes.

The significant amounts reclassified out of each component of AOCL, net of income taxes, during the three months ended March 31, 2016 and 2015 are as follows:

Amount Reclassified from AOCL							
(millions of dollars)	2016 <sup>1</sup>	2015 <sup>1</sup>	Statement of Income Line Item				
Amortization of losses from cash flow hedges Losses	4	3	Net interest expense and fuel expense				
Amortization of amounts related to pension and other post-employment benefits							
Net actuarial loss	3	5	See (2) below				
Total reclassifications for the period	7	8					

<sup>1</sup> All amounts are net of income taxes.

<sup>2</sup> These AOCL components are included in the computation of pension and OPEB costs (see Note 8 for additional details).

# 8. PENSION AND OPEB

OPG's pension and OPEB costs for the three months ended March 31, 2016 and 2015 are as follows:

	Registered Pension Plans		Supplen Pensior		OPEB	
(millions of dollars)	2016	2015	2016	2015	2016	2015
Components of Cost Recognized						
Current service costs	69	80	2	2	17	18
Interest on projected benefit obligation	158	157	3	3	33	32
Expected return on plan assets, net of expenses	(183)	(179)	-	-	-	-
Amortization of net actuarial loss <sup>1</sup>	<b>4</b> 8	73	1	1	5	7
Cost recognized <sup>2</sup>	92	131	6	6	55	57

<sup>1</sup> The amortization of net actuarial loss is recognized as an increase to other comprehensive income. This increase in the first quarter of 2016 was partially offset by a decrease in the Pension and OPEB Regulatory Asset of \$50 million (three months ended March 31, 2015 – \$75 million).

<sup>2</sup> These pension and OPEB costs for the three months ended March 31, 2016 exclude the reduction of costs resulting from the recognition of additions to the regulatory assets for the Pension & OPEB Cash Versus Accrual Differential Deferral Account and the Pension & OPEB Cash Payment Variance Account of \$34 million and \$2 million, respectively (three months ended March 31, 2015 – \$67 million and \$7 million, respectively).

# 9. RISK MANAGEMENT AND DERIVATIVES

OPG is exposed to risks related to changes in market interest rates on debt expected to be issued in the future and movements in foreign currency that affect the Company's assets, liabilities, and forecasted transactions. Select derivative instruments are used to manage such risks. Derivatives are used as hedging instruments, as well as for trading purposes.

Interest rate risk is the risk that the value of assets and liabilities can change due to movements in related interest rates. Interest rate risk for OPG arises with the need to refinance existing debt and/or undertake new financing. The management of these risks includes using derivatives to hedge the exposure in accordance with corporate risk management policies. OPG periodically uses interest rate swap agreements to mitigate elements of interest rate risk exposure associated with anticipated financing.

OPG's financial results are exposed to volatility in the Canadian/US foreign exchange rate as fuels and certain supplies and services purchased for generating stations and major development projects are primarily denominated in, or tied to US dollars. OPG enters into foreign exchange derivatives and agreements with major financial institutions, when appropriate, in order to manage the Company's exposure to foreign currency movements.

The majority of OPG's revenues are derived from sales through the Independent Electricity System Operator (IESO) administered spot market. Market participants in the IESO spot market provide collateral in accordance with the IESO prudential support requirements to cover funds that they might owe to the market. Although the credit exposure to the IESO represents a significant portion of OPG's accounts receivable, the Company's management accepts this risk due to the IESO's primary role in the Ontario electricity market. The remaining receivables exposure is to a diverse group of generally high quality counterparties. OPG's allowance for doubtful accounts as at March, 2016 was less than \$1 million. OPG's fair value derivatives totalled a net liability of \$13 million as at March 31, 2016 (December 31, 2015 – \$2 million).

Existing net losses of \$21 million related to unrealized gains and losses on cash flow hedges deferred in AOCL as at March 31, 2016 are expected to be reclassified to net income within the next 12 months.

### **10. FAIR VALUE MEASUREMENTS**

The fair value of financial instruments traded in active markets is based on quoted market prices at the consolidated balance sheet dates. A market is regarded as active if quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service, or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis. The quoted market price used for financial assets held by OPG is the current bid price. These instruments are included in Level 1 of the fair value hierarchy and are comprised primarily of equity investments and fund investments. The fair value hierarchy groups financial instruments into three levels, based on the significance of inputs used in measuring the fair value of the assets and liabilities.

For financial instruments which do not have quoted market prices directly available, fair values are estimated using forward price curves developed from observable market prices or rates. The estimate of fair value may include the use of valuation techniques or models, based wherever possible on assumptions supported by observable market prices or rates prevailing at the dates of the interim consolidated balance sheets. This is the case for over-the-counter derivatives and securities, which include energy commodity derivatives, foreign exchange derivatives, interest rate swap derivatives, and fund investments. Pooled fund investments are valued at the unit values supplied by the pooled fund administrators. The unit values represent the underlying net assets at fair values, determined using closing market prices. Valuation models use general assumptions and market data and therefore do not reflect the specific risks and other factors that would affect a particular instrument's fair value. The methodologies used for calculating the fair value adjustments are reviewed on an ongoing basis to ensure that they remain appropriate. If all

significant inputs required to measure an instrument at fair value are observable, the instrument is included in Level 2 of the fair value hierarchy.

If one or more of the significant inputs is not based on observable market data, the instrument is included in Level 3 of the fair value hierarchy. Specific valuation techniques are used to value these instruments. Significant Level 3 inputs include recent comparable transactions, comparable benchmark information, bid/ask spread of similar transactions, and other relevant factors.

Certain alternative investments are measured at fair value by their investment managers using net asset value (NAV). Investments measured at NAV as a practical expedient for determining their fair value are excluded from the fair value hierarchy.

The following is a summary of OPG's financial instruments and their fair value as at March 31, 2016 and December 31, 2015:

		Fair Value		/ing ie <sup>1</sup>		
(millions of dollars)	2016	2015	2016	2015	Balance Sheet Line Item	
Nuclear Funds (includes current portion) <sup>2</sup>	15,272	15,136	15,272	15,136	Nuclear fixed asset removal and nuclear waste management funds	
Payable related to cash flow hedges	(54)	(56)	(54)	(56)	Long-term accounts payable and accrued charges	
Long-term debt (includes current portion)	(6,068)	(5,978)	(5,472)	(5,472)	Long-term debt	
Other financial instruments	(6)	6	(6)	6	Various	

<sup>1</sup> The carrying values of other financial instruments included in cash and cash equivalents, receivables from related parties, other short-term assets, short-term debt, and accounts payable and accrued charges approximate their fair value due to the immediate or short-term maturity of these financial instruments.

<sup>2</sup> The Nuclear Funds are comprised of the Decommissioning Segregated Fund (Decommissioning Fund) and the Used Fuel Segregated Fund (Used Fuel Fund).

The fair value of long-term debt instruments is determined based on a conventional pricing model, which is a function of future cash flows, the current market yield curve and term to maturity. These inputs are considered to be Level 2 inputs.

The following tables present financial assets and liabilities measured at fair value in accordance with the fair value hierarchy as at March 31, 2016 and December 31, 2015:

	March 31, 2016				
(millions of dollars)	Level 1	Level 2	Level 3	Total	
Assets Used Fuel Fund					
Investments measured at fair value, excluding investments measured at NAV <sup>1</sup>	4,841	4,458	-	9,299	
Investments measured at NAV <sup>1</sup>				894	
Due to Province				10,193 (1,544)	
Used Fuel Fund, net				8,649	
Decommissioning Fund Investments measured at fair value, excluding investments measured at NAV <sup>1</sup> Investments measured at NAV <sup>1</sup>	3,665	3,320	-	6,985 746	
Due to Province				7,731 (1,108)	
Decommissioning Fund, net				6,623	
Other financial assets	14	4	11	29	
Liabilities Other financial liabilities	(23)	(11)	(1)	(35)	

<sup>1</sup> Investments measured at fair value using NAV as a practical expedient have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to amounts presented on the interim consolidated balance sheets.

	December 31, 2015					
(millions of dollars)	Level 1	Level 2	Level 3	Total		
Assets						
Used Fuel Fund						
Investments measured at fair value, excluding investments measured at NAV <sup>1</sup>	5,022	4,385	-	9,407		
Investments measured at NAV <sup>1</sup>				883		
				10,290		
Due to Province				(1,703)		
Used Fuel Fund, net				8,587		
Decommissioning Fund						
Investments measured at fair value, excluding investments measured at NAV <sup>1</sup>	3,828	3,269	-	7,097		
Investments measured at NAV <sup>1</sup>				737		
				7,834		
Due to Province				(1,285)		
Decommissioning Fund, net				6,549		
Other financial assets	14	4	16	34		
Liabilities						
Other financial liabilities	(18)	(8)	(2)	(28)		

<sup>1</sup> Investments measured at fair value using NAV as a practical expedient have not been classified in the fair value hierarchy. The fair value amounts for these investments presented in this table are intended to permit the reconciliation of the fair value hierarchy to amounts presented on the interim consolidated balance sheets.

During the three months ended March 31, 2016, there were no transfers between Level 1 and Level 2. In addition, there were no transfers into and out of Level 3.

The following tables present the changes in OPG's assets and liabilities measured at fair value that are classified as Level 3 for the three months ended March 31, 2016:

Opening balance, January 1, 2016 Realized losses included in revenue Purchases	Other financial instruments
Realized losses included in revenue	14
	(5)
Closing balance, March 31, 2016	(5) 1 10

### **Nuclear Funds**

The fair value of the investments within the Nuclear Funds' alternative investment portfolio is determined using appropriate valuation techniques, such as recent arm's length market transactions, references to current fair values of other instruments that are substantially the same, discounted cash flow analyses, third-party independent appraisals, valuation multiples, or other valuation methods. Any control, size, liquidity or other discount premiums on the investments are considered in the determination of fair value.

The process of valuing investments for which no published market price exists is based on inherent uncertainties and the resulting values may differ from values that would have been used had a ready market existed for these investments. The values may also differ from the prices at which the investments may be sold.

The following are the classes of investments within the Nuclear Funds that are reported on the basis of NAV as at March 31, 2016:

(millions of dollars except where noted)	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice
Infrastructure	981	317	n/a	n/a
Real Estate	611	218	n/a	n/a
Agriculture	48	141	n/a	n/a
Pooled Funds				
Short-term Investments	28	n/a	Daily	1 - 5 Days
Fixed Income	625	n/a	Daily	1 - 5 Days
Equity	681	n/a	Daily	1 - 5 Days
Total	2,974	676		

The fair value of the pooled funds is classified as Level 2. Infrastructure, real estate and agriculture investments are measured using NAV as a practical expedient for determining their fair value.

### **Infrastructure**

This class includes investments in funds whose investment objective is to generate a combination of long-term capital appreciation and current income, generally through investments such as energy, transportation and utilities. The fair values of investments in this class have been estimated using the NAV of the Nuclear Funds' ownership interest in partners' capital and/or underlying investments held by subsidiaries of an infrastructure fund. The investments in the respective infrastructure funds are not redeemable. However, the Nuclear Funds may transfer any of its partnership interests/shares to another party, as stipulated in the partnership agreements and/or shareholders' agreements. Distributions from each infrastructure fund will be received based on the operations of the underlying investments and/or as the underlying investments of the infrastructure funds are liquidated. It is not possible to estimate when the

underlying assets of the infrastructure funds will be liquidated. However, the infrastructure funds have a maturity end period ranging from 2019 to 2025.

# Real Estate

This class includes investment in institutional-grade real estate property located in Canada. The investment objective is to provide a stable level of income with the opportunity for long-term capital appreciation. The fair values of the investments in this class have been estimated using the NAV of the Nuclear Funds' ownership interest in these investments. The partnership investments are not redeemable. However, the Nuclear Funds may transfer any of its partnership interests to another party, as stipulated in the partnership agreement. For investments in private real estate corporations, shares may be redeemed through a pre-established redemption process. It is not possible to estimate when the underlying assets in this class will be liquidated.

### Agriculture

This class includes a diversified portfolio of global farmland and timberland investments. The investment objective is to provide a differentiated return source, income yield, and inflation protection. The fair values of the investments in this class have been estimated using the NAV of the Nuclear Funds' ownership interest in these investments. The investments are not redeemable. However, the Nuclear Funds may transfer any of its partnership interests/shares to another party, as stipulated in the partnership agreements and/or shareholders' agreements.

### Pooled Funds

This class represents investments in pooled funds, which primarily include a diversified portfolio of fixed income securities, issued mainly by Canadian corporations and diversified portfolios of Emerging Market listed equity. The investment objective of the pooled funds is to achieve capital appreciation and income through professionally managed portfolios. The fair value of the investments in this class has been estimated using the NAV per share of the investments. There are no significant restrictions on the ability to sell the investments in this class.

# **11. COMMITMENTS AND CONTINGENCIES**

# Litigation

On August 9, 2006, a Notice of Action and Statement of Claim filed with the Ontario Superior Court of Justice in the amount of \$500 million was served against OPG and Bruce Power L.P. (Bruce Power) by British Energy Limited and British Energy International Holdings Limited (together British Energy). The action is for contribution and indemnity of any amounts British Energy was liable for in an arbitration against it by some of the owners of Bruce Power regarding an alleged breach of British Energy's representations and warranties to the claimants when they purchased British Energy's interest in Bruce Power (the Arbitration). Both the action and the Arbitration relate to corrosion to a steam generator unit discovered after OPG leased the Bruce nuclear generating stations to Bruce Power.

In 2012, the arbitrator found that British Energy was liable to the claimants for some of the damages they claimed. The final settlement amount was valued by British Energy at \$71 million. In September 2014, British Energy amended its Statement of Claim (Amended Claim) to reduce the claim amount to \$100 million to reflect that the purchasers of British Energy's interest in Bruce Power did not receive the full damages they originally claimed in the Arbitration. British Energy also added an allegation to its Amended Claim that OPG breached a covenant to maintain the steam generator between the time of the initial agreement to lease and the effective date of the lease in accordance with "Good Utility Practices".

Various other legal proceedings are pending against OPG or its subsidiaries covering a wide range of matters that arise in the ordinary course of its business activities.

Each of these matters is subject to various uncertainties. Some of these matters may be resolved unfavourably. While it is not possible to determine the ultimate outcome of the various pending actions, it is the Company's belief that their resolution is not likely to have a material adverse impact on its financial position.

#### Guarantees

The Company and its joint venture partners have jointly guaranteed the financial performance of jointly owned entities related primarily to the payment of liabilities. As at March 31, 2016, the total amount of guarantees OPG provided to these entities was \$83 million. OPG may terminate some of these guarantees within a short time frame by providing written notice to the counterparties at any time. Other guarantees have terms ending between 2019 and 2029. As at March 31, 2016, the potential impact of the fair value of these guarantees to income has been estimated to be negligible and OPG does not expect to make any payments associated with these guarantees.

#### **Contractual and Commercial Commitments**

OPG's contractual obligations as at March 31, 2016, are as follows:

(millions of dollars)	<b>2016</b> <sup>1</sup>	2017	2018	2019	2020	Thereafter	Total
Fuel supply agreements	137	177	167	100	67	114	762
Contributions under the Ontario Nuclear Funds Agreement <sup>2</sup>	113	163	193	288	133	2,285	3,175
Contributions to the OPG registered pension plan <sup>3</sup>	267	-	-	-	-	-	267
Long-term debt repayment	273	1,103	398	368	663	2,667	5,472
Interest on long-term debt	178	242	186	167	145	2,275	3,193
Short-term debt repayment	249	-	-	-	-	, -	249
Commitments related to Darlington Refurbishment <sup>4</sup>	285	-	-	-	-	-	285
Commitments related to Peter Sutherland Sr. GS	135	33	-	-	-	-	168
Operating licence	31	43	37	23	24	142	300
Operating lease obligations	16	17	17	14	14	42	120
Unconditional purchase obligations	48	61	58	57	55	5	284
Accounts payable and accrued charges	890	5	11	-	-	18	924
Other	54	14	5	2	2	69	146
Total	2,676	1,858	1,072	1,019	1,103	7,617	15,345

<sup>1</sup> Represents amounts for the remainder of the year.

<sup>2</sup> Contributions under the Ontario Nuclear Funds Agreement (ONFA) are based on the 2012 ONFA Reference Plan contribution schedule approved in 2012. An updated ONFA Reference Plan is expected to be effective January 1, 2017.

<sup>3</sup> The pension contributions include ongoing funding requirements and additional funding requirements towards the deficit, in accordance with the actuarial valuation of the OPG registered pension plan as at January 1, 2014. The next actuarial valuation of the OPG registered pension plan as at January 1, 2017. The pension contributions are affected by various factors including market performance, changes in actuarial assumptions, plan experience, changes in the pension regulatory environment, and the timing of funding valuations. Funding requirements after 2016 are excluded due to significant variability in the assumptions required to project the timing of future cash flows. The amount of OPG's additional, voluntary contribution, if any, is revisited from time to time.

<sup>4</sup> Estimated currently committed costs to close the project, including demobilization of project staff and cancellation of existing contracts and material orders.

# 12. BUSINESS SEGMENTS

Segment Income	F	Regulated		Unre	gulated		
(Loss) for the Three		Nuclear			Services,		
Months Ended		Waste		Contracted	Trading,		
March 31, 2016	Nuclear	Manage-	Hydro-	Generation	and other Non	-	
(millions of dollars)	Generation	ment	electric	Portfolio	Generation	Elimination	Total
Revenue	926	34	385	145	21	(33)	1,478
Fuel expense	81	-	79	12	-	-	172
Gross margin	845	34	306	133	21	(33)	1,306
Operations,	563	36	76	40	4	(33)	686
maintenance and							
administration							
Depreciation and	230	-	56	19	7	-	312
amortization							
Accretion on fixed	-	228	-	2	2	-	232
asset removal and							
nuclear waste							
management							
liabilities							
Earnings on nuclear	-	(147)	-	-	-	-	(147)
fixed asset removal		. ,					. ,
and nuclear waste							
management funds							
Property taxes	7	-	-	2	3	-	12
Income from	-	-	-	(8)	-	-	(8)
investments subject							( )
to significant influence							
Other gains	(1)	-	(22)	-	-	-	(23)
Income (loss) before							/
interest and income							
taxes	46	(83)	196	78	5	-	242

Segment Income (Loss) for the Three	F	Regulated	Unregulated				
Months Ended March 31, 2015 (millions of dollars)	Nuclear Generation	Nuclear Waste Manage- ment	Hydro- electric	Contracted Generation Portfolio	Services, Trading, and other Non- Generation	Elimination	Total
Revenue	813	32	394	123	24	(31)	1,355
Fuel expense	78	-	71	7	1	-	157
Gross margin	735	32	323	116	23	(31)	1,198
Operations, maintenance and administration	526	34	76	44	16	(31)	665
Depreciation and amortization	114	-	60	17	5	-	196
Accretion on fixed asset removal and nuclear waste management liabilities	-	220	-	2	2	-	224
Earnings on nuclear fixed asset removal and nuclear waste management funds	-	(231)	-	-	-	-	(231)
Property taxes	7	-	-	2	4	-	13
Income from investments subject to significant influence	-	-	-	(11)	-	-	(11)
Income (loss) before interest and income							
taxes	88	9	187	62	(4)	-	342

# 13. NET CHANGES IN NON-CASH WORKING CAPITAL BALANCES

	Three Months Ended March 31			
(millions of dollars)	2016	2015		
Receivables from related parties	(4)	56		
Other accounts receivable and prepaid expenses	(30)	(20)		
Fuel inventory	<b>`11</b>	`10 <sup>´</sup>		
Income taxes payable/recoverable	15	30		
Materials and supplies	1	5		
Accounts payable and accrued charges	(115)	(46)		
	(122)	35		

# 14. INVESTMENTS SUBJECT TO SIGNIFICANT INFLUENCE

Investments subject to significant influence consist of OPG's 50 percent ownership interest in the jointly controlled entities of the Portlands Energy Centre (PEC) gas-fired combined cycle generating station and the Brighton Beach gas-fired combined cycle generating station (Brighton Beach), which are accounted for using the equity method. Details of the balances as at March 31, 2016 and December 31, 2015 are as follows:

(millions of dollars)	2016	2015
PEC		
Current assets	15	14
Long-term assets	266	270
Current liabilities	(7)	(4)
Long-term liabilities	(5)	(5)
Brighton Beach		
Current assets	5	9
Long-term assets	174	177
Current liabilities	(15)	(15)
Long-term debt	(101)	(104)
Other long-term liabilities	(6)	(6)
Investments subject to significant influence	326	336

# **15. SUBSEQUENT EVENT**

During 2015, OPG entered into renewed three-year collective bargaining agreements with the Power Workers' Union (PWU) and The Society of Energy Professionals (The Society). Changes to the respective collective agreements included increases to employee pension plan contributions and provisions for existing employees represented by the PWU and The Society with eligibility to annually receive common shares of Hydro One Limited (Hydro One) for up to 15 years starting in the third year of the respective agreements.

In April 2016, OPG acquired nine million common shares of Hydro One at \$23.65 per share as part of a secondary share offering by the Province through a syndicate of underwriters. OPG paid the same price as other investors in the offering. The acquisition was made for investment purposes to mitigate the risk of future price volatility related to OPG's future share delivery obligations under the collective agreements. The shares acquired in this transaction represent the substantial majority of OPG's currently anticipated purchases of Hydro One shares.

# ONTARIO POWER GENERATION INC. MANAGEMENT'S DISCUSSION AND ANALYSIS 2016 FIRST QUARTER REPORT

# TABLE OF CONTENTS

Forward-Looking Statements	2
The Company	3
Highlights	4
Core Business, Strategy and Outlook	8
Discussion of Operating Results by Business Segment	13
Regulated – Nuclear Generation Segment	13
Regulated – Nuclear Waste Management Segment	14
Regulated – Hydroelectric Segment	15
Contracted Generation Portfolio Segment	16
Services, Trading, and Other Non-Generation Segment	17
Liquidity and Capital Resources	17
Balance Sheet Highlights	19
Changes in Accounting Policies and Estimates	19
Risk Management	20
Related Party Transactions	21
Internal Controls over Financial Reporting and Disclosure Controls	22
Quarterly Financial Highlights	23
Supplementary Non-GAAP Financial Measures	24



# ONTARIO POWER GENERATION INC. MANAGEMENT'S DISCUSSION AND ANALYSIS

This Management's Discussion and Analysis (MD&A) should be read in conjunction with the unaudited interim consolidated financial statements and accompanying notes of Ontario Power Generation Inc. (OPG or Company) as at and for the three months ended March 31, 2016. OPG's unaudited interim consolidated financial statements are prepared in accordance with United States generally accepted accounting principles (US GAAP) and are presented in Canadian dollars.

For a complete description of OPG's corporate strategies, risk management, corporate governance, and the effect of critical accounting policies and estimates on OPG's results of operations and financial condition, this MD&A should also be read in conjunction with OPG's audited consolidated financial statements, accompanying notes, and the MD&A as at and for the year ended December 31, 2015.

As required by *Ontario Regulation 395/11*, as amended, a regulation under the *Financial Administration Act* (Ontario), OPG adopted US GAAP for the presentation of its consolidated financial statements, effective January 1, 2012. In 2014, the Ontario Securities Commission approved an exemption which allows OPG to apply US GAAP up to January 1, 2019. The term of the exemption is subject to certain conditions, which may result in the expiry of the exemption prior to January 1, 2019. For details, refer to the heading, *Exemptive Relief for Reporting under US GAAP*, in the section, *Critical Accounting Policies and Estimates*, in OPG's 2015 annual MD&A. This MD&A is dated May 13, 2016.

# FORWARD-LOOKING STATEMENTS

The MD&A contains forward-looking statements that reflect OPG's current views regarding certain future events and circumstances. Any statement contained in this document that is not current or historical is a forward-looking statement. OPG generally uses words such as "anticipate", "believe", "foresee", "forecast", "estimate", "expect", "schedule", "intend", "plan", "project", "seek", "target", "goal", "strategy", "may", "will", "should", "could" and other similar words and expressions to indicate forward-looking statements. The absence of any such word or expression does not indicate that a statement is not forward-looking.

All forward-looking statements involve inherent assumptions, risks and uncertainties, including those set out under the section, *Risk Management*, and forecasts discussed under the heading, *Outlook*. All forward-looking statements could be inaccurate to a material degree. In particular, forward-looking statements may contain assumptions such as those relating to OPG's fuel costs, generating station performance and availability, cost of fixed asset removal and nuclear waste management, performance of investment funds, conversion of generating stations to alternative fuels, refurbishment of existing facilities, development and construction of new facilities, pension and other postemployment benefit (OPEB) obligations and funds, income taxes, proposed new legislation, the ongoing evolution of the Ontario electricity industry, environmental and other regulatory requirements, health, safety and environmental developments, business continuity events, the weather, applications to the Ontario Energy Board (OEB) for regulated prices, the impact of regulatory decisions by the OEB, forecasts of earnings, cash flows, Funds from Operations (FFO) Adjusted Interest Coverage, Return on Common Equity Excluding Accumulated Other Comprehensive Income (ROE Excluding AOCI), and capital expenditures. Accordingly, undue reliance should not be placed on any forwardlooking statement. The forward-looking statements included in this MD&A are made only as of the date of this MD&A. Except as required by applicable securities laws, OPG does not undertake to publicly update these forwardlooking statements to reflect new information, future events or otherwise.

# THE COMPANY

OPG is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity in Ontario. OPG was established under the *Business Corporations Act* (Ontario) and is wholly owned by the Province of Ontario (Province or Shareholder).

As at March 31, 2016, OPG's electricity generation portfolio had an in-service capacity of 17,052 megawatts (MW). OPG operates two nuclear generating stations, three thermal generating stations, 65 hydroelectric generating stations, and one wind power turbine. In addition, OPG and TransCanada Energy Ltd. co-own the 550 MW Portlands Energy Centre (PEC) gas-fired combined cycle generating station (GS). OPG and ATCO Power Canada Ltd. co-own the 560 MW Brighton Beach gas-fired combined cycle GS (Brighton Beach). OPG's 50 percent share of the inservice capacity and generation volume of these co-owned facilities is included in the generation portfolio statistics set out in this report. The income from the co-owned facilities is accounted for using the equity method of accounting, and OPG's share of income is presented as income from investments subject to significant influence in the Contracted Generation Portfolio segment.

OPG also owns two other nuclear generating stations, the Bruce A GS and the Bruce B GS, which are leased on a long-term basis to Bruce Power LP (Bruce Power). Income from these leased stations is included in revenue under the Regulated – Nuclear Generation segment. The leased stations are not included in the generation portfolio statistics set out in this report. A description of OPG's segments is provided in OPG's 2015 annual MD&A in the section, *Business Segments*.

OPG does not operate PEC, Brighton Beach, the Bruce A GS, and the Bruce B GS.

	As at		
	March 31	December 31	
<u>(</u> <i>MW</i> )	2016	2015	
Regulated – Nuclear Generation	6,606	6,606	
Regulated – Hydroelectric	6,425	6,428	
Contracted Generation Portfolio 1	4,021	4,021	
		/=	
Total	17,052	17,055	

The in-service generating capacity by business segment as at March 31, 2016 and December 31, 2015 was as follows:

<sup>1</sup> Includes OPG's share of in-service generating capacity of 275 MW for PEC and 280 MW for Brighton Beach.

# HIGHLIGHTS

## **Overview of Results**

This section provides an overview of OPG's unaudited interim consolidated operating results. Significant factors which contributed to OPG's results during the three months ended March 31, 2016, compared to the same period in 2015, are discussed below.

	Three Months Ended March 31		
(millions of dollars – except where noted) (unaudited)	2016	2015	
Revenue	1,478	1,355	
Fuel expense	172	157	
Gross margin	1,306	1,198	
Operations, maintenance and administration	686	665	
Depreciation and amortization	312	196	
Accretion on fixed asset removal and nuclear waste management liabilities	232	224	
Earnings on nuclear fixed asset removal and nuclear waste management funds	(147)	(231)	
Income from investments subject to significant influence	(8)	(11)	
Property taxes	12	`13 <sup>´</sup>	
	1,087	856	
Income before other gains, interest, and income taxes	219	342	
Other gains	(23)	-	
Income before interest and income taxes	242	342	
Net interest expense	33	47	
Income before income taxes	209	295	
Income tax expense	81	56	
	•.		
Net income	128	239	
Net income attributable to the Shareholder	123	234	
Net income attributable to non-controlling interest <sup>1</sup>	5	234	
	5	5	
Electricity production (TWh) <sup>2</sup>	21.0	21.3	
Cash flow provided by operating activities	366	455	

<sup>1</sup> Relates to the 25 percent interest of the Amisk-oo-Skow Finance Corporation, a corporation wholly owned by the Moose Cree First Nation, in the Lower Mattagami Limited Partnership.

<sup>2</sup> Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

Net income attributable to the Shareholder decreased by \$111 million during the first quarter of 2016, compared to the same quarter in 2015.

Income before interest and income taxes decreased by \$100 million, compared to the first quarter of 2015. The following summarizes the significant items which contributed to the variance:

Significant factors that reduced income before interest and income taxes:

- Decrease in earnings on the nuclear fixed asset removal and nuclear waste management funds (Nuclear Funds) of \$84 million, primarily due to lower earnings on the Decommissioning Segregated Fund (Decommissioning Fund)
- Higher operations, maintenance and administration (OM&A) expenses of \$37 million for the Regulated Nuclear Generation segment, primarily as a result of an increase in planned outage activities during the first quarter of 2016, compared to the same quarter in 2015.

Significant factors that increased income before interest and income taxes:

- A gain of \$22 million recorded during the first quarter of 2016 reflecting the OEB's January 2016 decision to reverse a portion of an earlier capital cost disallowance related to Niagara Tunnel project expenditures, in response to OPG's motion requesting the OEB to review and vary parts of its November 2014 decision
- Lower earnings of \$16 million during the first quarter of 2015 in the Contracted Generation Portfolio segment, primarily as a result of a provision made in that quarter related to an Independent Electricity System Operator (IESO) audit.

Net interest expense decreased by \$14 million during the first quarter of 2016, compared to the same quarter in 2015, primarily due to higher interest capitalized for the Darlington Refurbishment project expenditures.

Income tax expense for the three months ended March 31, 2016 was \$81 million compared to \$56 million for the same period in 2015. The increase in income tax expense was primarily due to a decrease in regulatory asset balances related to income taxes recorded in the first guarter of 2016.

### **Segment Results**

The following table summarizes OPG's income before interest and income taxes by business segment. A detailed discussion of OPG's performance by reportable segment is included in the section, *Discussion of Operating Results by Business Segment*.

	Three Months Ended March 31	
(millions of dollars)	2016	2015
Income (loss) before interest and income taxes		
Regulated – Nuclear Generation	46	88
Regulated – Hydroelectric	196	187
Contracted Generation Portfolio	78	62
Total electricity generation business segments	320	337
Regulated – Nuclear Waste Management	(83)	9
Services, Trading, and Other Non-Generation	5	(4)
	242	342

### **Electricity Generation**

Electricity generation was as follows:

	Three Months Ended March 31	
<u>(</u> <i>TWh</i> )	2016	2015
Regulated – Nuclear Generation	12.3	12.2
Regulated – Hydroelectric	7.9	8.2
Contracted Generation Portfolio <sup>1</sup>	0.8	0.9
Total OPG electricity generation	21.0	21.3
Total electricity generation by all other generators in Ontario <sup>2</sup>	18.9	21.5

<sup>1</sup> Includes OPG's share of generation volume from its 50 percent ownership interests in PEC and Brighton Beach.

<sup>2</sup> Non-OPG generation is calculated as the Ontario electricity demand plus net exports, as published by the IESO, minus total OPG electricity generation.

The decrease in OPG's electricity generation during the first quarter of 2016, compared to the first quarter of 2015, was primarily due to lower generation of 0.3 terawatt hours (TWh) from the Regulated – Hydroelectric segment. The decrease in Regulated – Hydroelectric generation was primarily due to a higher volume of water spilled as a result of surplus baseload generation (SBG) conditions from lower Ontario electricity demand, partially offset by the effect of higher water flows.

OPG's operating results are affected by changes in grid-supplied electricity demand resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. Ontario's electricity demand as reported by the IESO was 35.2 TWh during the first quarter of 2016, compared to 37.5 TWh during the same quarter of 2015.

Baseload generation supply surplus to Ontario demand was more prevalent during the first quarter of 2016 than in the first quarter of 2015 due to warmer winter conditions and higher water flows in the province in 2016. The surplus to the Ontario market is managed by the IESO, mainly through generation reductions at hydroelectric and nuclear stations and grid-connected renewable resources. Reducing hydroelectric production, which often results in spilling of water, is the first measure that the IESO uses to manage SBG conditions. During the first quarter of 2016, OPG lost 1.7 TWh of hydroelectric generation due to SBG conditions, compared to 0.3 TWh during the same period in 2015. The gross margin impact of production forgone at OPG's regulated hydroelectric stations due to SBG conditions was offset by a regulatory variance account authorized by the OEB.

### **Average Sales Prices**

The majority of OPG's generation is from the Regulated – Nuclear Generation and Regulated – Hydroelectric segments. The regulated prices authorized by the OEB for electricity generated from OPG's nuclear and regulated hydroelectric generating stations are discussed in OPG's 2015 annual MD&A in the section, *Revenue Mechanisms for Regulated and Unregulated Generation*.

The average sales price for the Regulated – Nuclear Generation segment was 7.0 cents per kilowatt hour ( $\phi$ /kWh) during the first quarter of 2016, compared to 6.0  $\phi$ /kWh during the same quarter in 2015. The increase was due to a higher rate rider in effect during the first quarter of 2016 for OPG's nuclear generation related to the recovery of variance and deferral account balances previously approved by the OEB. The average sales price for the Regulated – Hydroelectric segment was 4.4  $\phi$ /kWh during the first quarter of 2016, compared to 4.5  $\phi$ /kWh during the same quarter in 2015. The marginal decrease was primarily due to lower rate riders in effect during the first quarter of 2016 for OPG's regulated hydroelectric generation related to the recovery of variance and deferral account balances. The revenue impact of rate riders is largely offset by changes in amortization expense related to regulatory balances.

# **Cash Flow from Operations**

Cash flow provided by operating activities for the three months ended March 31, 2016 was \$366 million, compared to \$455 million for the three months ended March 31, 2015. This decrease was primarily due to higher OM&A expenditures in the first quarter of 2016 and the payment of a supplemental rent rebate to Bruce Power pursuant to a provision under the lease agreement for the Bruce nuclear generating stations between Bruce Power and OPG (Bruce Lease). This provision was eliminated effective December 4, 2015 as part of the 2015 amendments to the lease agreement, as discussed in OPG's 2015 annual MD&A in the section, *Recent Developments*, under the heading, *Highlights*. The decrease in cash flow provided by operating activities for the first quarter of 2016 was partially offset by an increase in generation revenue receipts from higher nuclear rate riders.

# **ROE Excluding AOCI**

ROE Excluding AOCI is an indicator of OPG's performance consistent with the Company's strategy to provide value to the Shareholder. ROE Excluding AOCI is measured over a 12-month period.

ROE Excluding AOCI was 2.9 percent for the 12 months ended March 31, 2016 and 4.0 percent for the 12 months ended December 31, 2015. ROE Excluding AOCI decreased for the period primarily due to lower net income attributable to the Shareholder.

# **FFO Adjusted Interest Coverage**

FFO Adjusted Interest Coverage is an indicator of OPG's ability to meet interest obligations from operating cash flows. The indicator is measured over a 12-month period. FFO Adjusted Interest Coverage for the 12 months ended March 31, 2016 was 5.2 times, compared to 5.0 times for the 12 months ended December 31, 2015. FFO Adjusted Interest Coverage increased in 2016 primarily due to higher generation revenue as a result of higher nuclear rate riders in effect during the 12 months ended March 31, 2016, compared to the 12 months ended December 31, 2015.

# **Nuclear Total Generating Cost per Megawatt Hour**

Nuclear Total Generating Cost (TGC) per Megawatt Hour (MWh) is used to measure the cost performance of OPG's nuclear generating assets. Nuclear TGC per MWh is defined as OM&A expenses of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to OPG's nuclear electricity generation business), nuclear fuel expense for OPG-operated stations (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs) incurred during the period, divided by nuclear electricity generation. In 2015, the Nuclear TGC per MWh indicator was amended with a view to enhance comparability across periods including adjustments to remove the impact of regulatory variance and deferral accounts. The change is reflected in the comparative period presented in this MD&A. The Nuclear TGC per MWh is discussed further in the section, *Discussion of Operating Results by Business Segment*.

ROE Excluding AOCI, FFO Adjusted Interest Coverage, and Nuclear TGC are not measurements in accordance with US GAAP and should not be considered alternative measures to net income, cash flows from operating activities, or any other performance measure under US GAAP. OPG believes that these non-GAAP financial measures are effective indicators of its performance and are consistent with the Company's strategic imperatives and related objectives. The definition and calculation of ROE Excluding AOCI, FFO Adjusted Interest Coverage, and Nuclear TGC are found in the section, *Supplementary Non-GAAP Financial Measures*.

### **Recent Developments**

### Contract Award for Nanticoke Solar Facility

In March 2016, Nanticoke Solar LP, a partnership between OPG, SunEdison Canadian Construction LP, a solar project developer, and Six Nations Development Corporation, was selected, through the IESO's Large Renewable Procurement (LRP) program, to develop a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands in Haldimand County, Ontario. The LRP program is a competitive bidding process for procuring large renewable energy projects in Ontario.

In March 2016, Nanticoke Solar LP and the IESO executed a 20-year LRP contract, which formalized the terms and conditions for the development and operation of the new solar facility. Also in March 2016, the required performance and completion security for the project was provided to the IESO. The Company is working with its partners to obtain approvals and permits required to enable the commencement of construction planned for late-2017 or early-2018.

### Acquisition of Hydro One Limited Shares

During 2015, OPG entered into renewed three-year collective bargaining agreements with the Power Workers' Union (PWU) and The Society of Energy Professionals (The Society). Changes to the respective collective agreements included increases to employee pension plan contributions and provisions for existing employees represented by the PWU and The Society with eligibility to annually receive common shares of Hydro One Limited (Hydro One) for up to 15 years starting in the third year of the respective agreements.

In April 2016, OPG acquired nine million common shares of Hydro One at \$23.65 per share as part of a secondary share offering by the Province through a syndicate of underwriters. OPG paid the same price as other investors in the offering. The acquisition was made for investment purposes to mitigate the risk of future price volatility related to OPG's future share delivery obligations under the collective agreements. The shares acquired in this transaction represent the substantial majority of OPG's currently anticipated purchases of Hydro One shares.

# Federal Court of Appeal Decision on the Environmental Assessment for the Darlington Refurbishment Project

In 2013, the Canadian Nuclear Safety Commission (CNSC) and Fisheries and Oceans Canada, as responsible authorities, issued a decision on the environmental assessment (EA) for the Darlington Refurbishment project, which confirmed that taking into account identified mitigation measures, the project was not likely to cause significant adverse environmental effects. Later in 2013, the EA decision was challenged by certain intervenors in the EA process by way of a request for a judicial review. The challenge was dismissed by the court in 2014, following which the intervenors filed an appeal to the Federal Court of Appeal. In April 2016, the Federal Court of Appeal unanimously dismissed the request for a judicial review. The Court determined that there were no gaps in the EA, that there was nothing unreasonable about the discretionary determinations made by the responsible authorities, and that the intervenors' arguments were not borne out by the evidence. OPG was also awarded its costs of the appeal as the successful party.

# Supreme Court Decision on Leave to Appeal the EA for New Nuclear Units

In November 2015, an application for leave to appeal was filed with the Supreme Court of Canada (Supreme Court) by the parties that brought the judicial review for the Darlington New Nuclear Project EA following the Joint Review Panel's (JRP) Report, which was approved by the federal government in May 2012. The JRP Report had concluded that the project was not likely to cause significant adverse environmental effects, given mitigation. In April 2016, the Supreme Court dismissed the application for leave to appeal, which concluded the litigation.

# CORE BUSINESS, STRATEGY AND OUTLOOK

The discussion in this section is qualified in its entirety by the caution included in the section, *Forward-Looking Statements*, at the beginning of the MD&A.

OPG delivers value to Ontario electricity customers and its Shareholder, the Province of Ontario, by reliably and cost effectively producing electricity from its diversified portfolio of clean energy generating assets while operating in a safe, transparent, environmentally responsible and commercial sound manner. OPG also seeks to pursue, on a commercial basis, generation development projects and other business growth opportunities to the benefit of the Shareholder.

The following sections provide an update to OPG's disclosures in the 2015 annual MD&A related to its four key strategic imperatives – operational excellence, project excellence, financial strength, and social licence. A detailed discussion of these strategic imperatives is included in the 2015 annual MD&A under the headings, *Operational Excellence, Project Excellence, Financial Strength,* and *Social Licence* in the *Core Business and Strategy* section.

# **Operational Excellence**

Operational excellence at OPG is accomplished by the safe and environmentally responsible generation of reliable and cost-effective electricity from the Company's generating assets through a highly trained and engaged workforce.

### Public Safety

To ensure continued public safety, radiation exposure to members of the public resulting from the operation of OPG's nuclear generating stations is estimated on an annual basis for those individuals who live or work near the stations.

The annual dose to the public resulting from operations of each nuclear facility is expressed in microsieverts ( $\mu$ Sv), which is an international unit of radiation dose measurement. For 2015, the annual public doses resulting from the Darlington GS operations and the Pickering GS operations were 0.5  $\mu$ Sv and 1.2  $\mu$ Sv, respectively, which is approximately 0.1 percent of the annual legal limit of 1,000  $\mu$ Sv.

# Electricity Generation Production and Reliability

- Work continued to progress to enhance the integration of life cycle management and refurbishment programs at the Darlington GS during the first quarter of 2016. This included implementing staffing strategies to support both ongoing station operations and the refurbishment project, planning and incorporating pre-requisite work for the refurbishment into the station's work schedule, and identifying life cycle and aging management work to sustain safe and reliable station operations for the next three decades. Refer to the section, *Project Excellence,* for a further discussion of the Darlington Refurbishment project.
- Construction planning activities and contractor mobilization were completed for the execution of the Sir Adam Beck Pump GS reservoir refurbishment during the first quarter of 2016. Construction and dewatering activities commenced on April 1, 2016.
- During the first quarter of 2016, major equipment overhauls and rehabilitation work were completed at Unit 5 of the Sir Adam Beck Pump GS, and dam concrete replacement work commenced at the Kakabeka Falls GS.
- OPG continues to develop the decommissioning plan for the Nanticoke GS, which will be designed to accommodate the construction and operation of the new 44 MW solar facility discussed in the *Highlights* section. The costs of decommissioning the Nanticoke GS are charged to a previously established decommissioning provision.

# Environmental Performance

In February 2016, the *Climate Change Mitigation and Low-Carbon Economy Act* (Bill 172) was introduced in the Ontario legislature. Bill 172 provides a foundation for an Ontario cap-and-trade program to regulate greenhouse gas (GHG) emissions in Ontario, effective January 1, 2017. With OPG's low GHG emitting fleet, the legislation and regulations, as drafted, are not expected to have a material adverse financial impact on the Company. As proposed, the cap-and-trade program may result in increased fuel costs for some of OPG-owned generating facilities and OPG's share of co-owned generating facilities. Based on the 2015 emissions data for these facilities, the increased fuel costs to OPG, if the cap-and-trade program had been in place, would not have had a material impact on the Company.

Disclosures relating to the Company's environmental policies and environmental risks are provided in the 2015 annual MD&A.

# Improving Efficiency and Reducing Costs

Since the beginning of 2011 to the end of the first quarter of 2016, through the Business Transformation and other initiatives, OPG has reduced regular headcount from ongoing operations by over 2,800, achieving cumulative savings of approximately \$1 billion. OPG continues to identify and pursue opportunities aimed at further cost efficiencies and productivity improvement across operating business units and support functions, while ensuring that adequate human resources are in place to meet the Company's business objectives. This includes embedding continuous improvement into organizational values and expected behaviours.

# **Project Excellence**

Project (millions of dollars)	Capital expenditur Year-to-date Life	res	Approved budget	Planned in-service date	Status
Darlington Refurbishment	203	2,369	12,800 <sup>1</sup>	2026 <sup>1</sup>	On track to commence Unit 2 refurbishment in the fourth quarter of 2016. See update below.
Deep Geologic Repository for Low and Intermediate Level Waste	1 <sup>2</sup>	187 <sup>2</sup>			Additional information required by the Canadian Environmental Assessment Agency is being prepared. See update below.
Peter Sutherland Sr. GS	. 30	125	300	First half of 2018	The project is tracking on budget and o schedule.

OPG is pursuing a number of generation development and other projects in support of Ontario's electricity planning initiatives. The status updates for OPG's current major projects as at March 31, 2016 are outlined below.

<sup>1</sup> The total project budget of \$12.8 billion is for the refurbishment of the four units at the Darlington GS, with the last unit scheduled to be completed by 2026. The refurbishment of the first unit is scheduled to commence in the fourth quarter of 2016. OPG will be required to obtain the Province's approval prior to proceeding with each of the remaining unit refurbishments.

<sup>2</sup> Expenditures are funded by the nuclear fixed asset removal and nuclear waste management liabilities (Nuclear Liabilities).

#### **Darlington Refurbishment**

The Darlington generating units are approaching their originally designed end-of-life. Refurbishment of the four generating units is expected to extend the operating life of the Darlington GS by approximately 30 years.

In 2016, the Darlington Refurbishment project transitioned from the planning phase to the execution phase, as OPG began preparations for the refurbishment of the first unit, Unit 2, which is scheduled to start in the fourth quarter of 2016.

Preparation activities on the major sub-projects are progressing in line with the first unit's refurbishment schedule. Manufacturing of the tools that will be used to perform the removal and replacement of fuel channel assemblies and feeder tubes in each reactor is complete. Delivery of these tools is in progress, tracking on plan for completion in the second quarter of 2016. A modification to increase the efficiency of the de-fueling equipment was successfully commissioned in January 2016, including an on-reactor demonstration. De-fueling is the first critical refurbishment activity once the unit is removed from service.

Execution of pre-breaker open work to support the first unit's refurbishment is in progress and is expected to be completed prior to the commencement of refurbishment activities on the first unit. Project support activities and activities in support of requirements set out in the CNSC-approved Integrated Implementation Plan for the Darlington GS are also underway. Pre-requisite projects including construction of facilities, infrastructure upgrades and installation of safety enhancements have either been completed or are tracking to be completed in line with the refurbishment execution schedule.

### Deep Geologic Repository for Low and Intermediate Level Waste

In February 2016, the federal Minister of Environment and Climate Change requested additional information on certain aspects of the EA for OPG's proposed Low and Intermediate Level Waste (L&ILW) Deep Geologic Repository (DGR), including information related to alternate locations for the project and the impact on cumulative environmental effects if the Nuclear Waste Management Organization's future used fuel repository were located in close proximity to

the proposed L&ILW DGR. In April 2016, OPG informed the Canadian Environmental Assessment Agency that it expects to submit the requested information by the end of 2016.

# Peter Sutherland Sr. GS

The project to construct the Peter Sutherland Sr. hydroelectric generating station is tracking on budget and on schedule. Construction work on the project continued during the first quarter of 2016, including construction of the project camp and setup of the batch concrete plant, power house concreting, slope stabilization of the intake canal, coffer dam rebuild, and headpond clearing activities. By the end of March 2016, construction and concrete work of below grade components were completed.

# **Financial Strength**

As a commercial enterprise, OPG's financial priority is to achieve a consistent level of strong financial performance that delivers an appropriate level of return on the Shareholder's investment and positions the Company for future growth.

# Increase Revenue, Reduce Costs and Achieve Appropriate Return

In the second quarter of 2016, OPG plans to file a 5-year application with the OEB for new base regulated prices for production from its regulated hydroelectric and nuclear facilities, with a proposed effective date of January 1, 2017. The new prices are expected to be determined, for the first time since OPG's prescribed assets became subject to rate regulation by the OEB, on the basis of an incentive regulation ratemaking methodology for the regulated hydroelectric operations and a custom incentive regulation basis for the nuclear operations. In addition, the application is expected to seek new rate riders, effective January 1, 2017, to recover or refund the December 31, 2015 balances in most of OPG's OEB-authorized variance and deferral accounts, less amounts previously approved for recovery or refund through existing rate riders in effect to December 31, 2016.

Consistent with the November 2015 amendment to *Ontario Regulation 53/05*, OPG plans to incorporate a nuclear rate smoothing proposal into the application, with a view of making more stable year-over-year changes in the nuclear base regulated prices during the Darlington refurbishment period. Under rate smoothing, collection of a portion of the approved revenue requirement will be deferred into the future. OPG expects to recognize the deferred amounts as income in the period to which the approved revenue requirement relates. The planned application will seek to ensure that nuclear regulated prices under the rate smoothing approach allows for sufficient cash flow to meet the Company's liquidity needs, support cost-effective funding for the Darlington Refurbishment project and other expenditures, and maintain the Company's investment grade credit rating, while taking into account both near-term and future impacts on customers. Further details on the requirements of *Ontario Regulation 53/05* with respect to nuclear rate smoothing can be found in OPG's 2015 MD&A under the heading, *Amendments to Ontario Regulation 53/05*, in the *Highlights* section.

### Ensure Availability of Cost Effective Funding

In April 2016, DBRS Ltd. re-affirmed the long-term credit rating on OPG's debt at A (low), and OPG's commercial paper rating at R-1 (low). All ratings from DBRS Ltd. have a stable outlook.

#### Outlook

The financial performance of OPG's regulated operations is driven, in large part, by the outcome of applications for regulated prices to the OEB. The existing base regulated prices were established by the OEB in late-2014 based on a forecast of revenue requirement and production for the regulated facilities for the 2014 to 2015 period. The outcome of the OEB rate application for new base regulated prices planned for the second quarter of 2016 is expected to provide substantial price certainty for the regulated business for the 2017 to 2021 period. Further discussion regarding OPG's planned rate application to the OEB can be found under the heading, *Financial Strength,* in the *Core Business, Strategy and Outlook* section.

In addition to receiving base regulated prices, during 2016, OPG is authorized to recover over \$600 million in previously approved variance and deferral account balances, through rate riders established by the OEB in October 2015. While the revenue impact of the riders will be largely offset by a corresponding increase in amortization expense related to regulatory balances resulting in no significant net income impact, the recovery of the balances will favourably impact operating cash flow and the FFO Adjusted Interest Coverage indicator for 2016. The existing rate riders will expire on December 31, 2016.

Several OEB-authorized regulatory variance and deferral accounts currently in place contribute to reducing the relative variability of the Company's income and ROE Excluding AOCI. In particular, existing variance accounts related to variability in regulated hydroelectric water flows and SBG conditions are expected to continue to result in generally more stable earnings from the Regulated – Hydroelectric segment, compared to the Regulated – Nuclear segment. There is currently no regulatory variance or deferral account related to the generation performance of the OPG-operated nuclear stations. OPG continues to operate and maintain its nuclear facilities with a view to optimize their performance and availability, while improving the overall reliability and predictability of the fleet. OPG's planned rate application will request the continuation of applicable variance and deferral accounts for the 2017 to 2021 period.

Electricity generated from most of OPG's non-regulated assets is subject to Energy Supply Agreements with the IESO. Based on these agreements, OPG expects the Contracted Generation Portfolio segment to generate a generally stable level of earnings and cash flow going forward.

OPG's forecast capital expenditures for 2016 are approximately \$1.9 billion. This includes amounts for the Darlington Refurbishment project, hydroelectric development projects including the construction of the Peter Sutherland Sr. GS, and sustaining capital investments across the generating fleet.

In addition to the operating and financial performance of the electricity generation business, OPG's results are impacted by the earnings on the Nuclear Funds established pursuant to the Ontario Nuclear Funds Agreement (ONFA) to fund expenditures associated with the long-term management of used nuclear fuel and L&ILW and the decommissioning of OPG's nuclear stations and waste management facilities. While these funds are managed to achieve, in the long term, the target rate of return based on the discount rate specified in the ONFA, the rates of return earned in a given period are subject to various external factors including financial market conditions and changes in the Ontario consumer price index (CPI), which can be volatile in the short-term and cause potentially significant short-term fluctuations in the Company's income, net of the impact of a regulatory variance account. The fluctuations in fund earnings are reflected in the values of the Nuclear Funds that are used to determine, in conjunction with cost estimates for nuclear waste management and decommissioning obligations, required cash contribution levels under the ONFA, typically every five years. The next update to the ONFA Reference Plan, which will form the basis for required contributions for the 2017-2021 period, is expected to be effective January 1, 2017.

# DISCUSSION OF OPERATING RESULTS BY BUSINESS SEGMENT

#### **Regulated – Nuclear Generation Segment**

	Three Months Ended March 31		
(millions of dollars) (unaudited)	2016	2015	
Revenue	926	813	
Fuel expense	81	78	
Gross margin	845	735	
Operations, maintenance and administration	563	526	
Depreciation and amortization	230	114	
Property taxes	7	7	
Income before other gains, interest, and income taxes	45	88	
Other gains	(1)	-	
~			
Income before interest and income taxes	46	88	

Income before interest and income taxes from the segment was \$46 million during the first quarter of 2016, compared to \$88 million for the same quarter in 2015. The decrease in earnings was mainly due to an increase in nuclear outage OM&A expenses, primarily as a result of an increase in planned outage activities during the first quarter of 2016.

The increase in segment revenue during the first quarter of 2016, compared to the same quarter in 2015, largely reflected rate riders authorized to the end of December 31, 2016 by the OEB in October 2015. The resulting nuclear rate rider of \$10.84/MWh in effect during the first quarter of 2016 was higher than the rate rider of \$1.33/MWh in effect during the first quarter of 2015. As these rate riders allowed for the recovery of approved balances in OEB-authorized regulatory variance and deferral accounts, the resulting increase in revenue in the first quarter of 2016 was largely offset by higher amortization expense related to the regulatory balances.

OPG revised the estimated useful lives of its nuclear generating stations for accounting purposes effective December 31, 2015, including extensions to the useful lives of the Bruce A and Bruce B generating stations to reflect the updated refurbishment agreement between the IESO and Bruce Power announced in December 2015. The useful life changes resulted in an increase in OPG's Nuclear Liabilities of \$2,330 million and a corresponding increase in the related asset retirement costs capitalized to property, plant and equipment, effective December 31, 2015. The resulting decrease in depreciation expense during the first quarter of 2016, compared to the same quarter in 2015, was largely offset by the impact of the existing Bruce Lease Net Revenues Variance Account and the Impact Resulting from Changes in Station End-of-Life Dates Deferral Account authorized by the OEB effective January 1, 2016. The new deferral account is discussed under the heading, *Balance Sheet Highlights*. Further details on changes to the estimated useful lives of the nuclear generating stations are found in the 2015 annual MD&A in the section, *Changes in Accounting Policies and Estimates*.

Segment revenue for the first quarter of 2016 reflected changes in lease and other revenues from Bruce Power related to the Bruce nuclear generating stations arising from the December 2015 amendments to the Bruce Lease and related agreements between OPG and Bruce Power. These changes were offset by the impact of the Bruce Lease Net Revenues Variance Account. Details on the changes to the above agreements are found in the 2015 annual MD&A under the heading, *Recent Developments*.

The Unit Capability Factors for the Darlington and Pickering generating stations and the Nuclear TGC per MWh for the three month periods ended were as follows:

		Three Months Ended March 31	
	2016	2015	
Unit Capability Factor (%)			
Darlington GS	97.2	97.8	
Pickering GS	72.8	72.9	
Nuclear TGC per MWh <i>(\$/MWh)</i>	56.37	57.68	

The slightly lower Unit Capability Factor at the Darlington GS for the three months ended March 31, 2016 reflected the increase in planned outage days at the station. The slight decrease in the Unit Capability Factor at the Pickering GS was due to an increase in planned outage days, partly offset by the continued improvements in reliability at the station.

The decrease in Nuclear TGC per MWh during the first quarter of 2016, compared to the same period in 2015, primarily reflected lower non-refurbishment capital expenditures. The definition and calculation of Nuclear TGC are found under the heading, *Supplementary Non-GAAP Financial Measures*.

### **Regulated – Nuclear Waste Management Segment**

	Three Months Ended March 31	
(millions of dollars) (unaudited)	2016	2015
Revenue Operations, maintenance and administration Accretion on nuclear fixed asset removal and nuclear waste management liabilities Earnings on nuclear fixed asset removal and nuclear waste management funds	34 36 228 (147)	32 34 220 (231)
(Loss) income before interest and income taxes	(83)	9

Lower earnings on the Decommissioning Fund, net of the impact of the Bruce Lease Net Revenues Variance Account, was the primary driver for the decrease in segment earnings during the first quarter of 2016, compared to the same quarter in 2015. The higher earnings in the first quarter of 2015 reflected stronger fund performance compared to the same period in 2016, resulting in the Decommissioning Fund becoming over 120 percent funded during the first quarter of 2015. Under the ONFA, if there is a surplus in the Decommissioning Fund such that the corresponding liability, as defined by the most recently approved ONFA Reference Plan, is at least 120 percent funded, OPG may direct up to 50 percent of the surplus over 120 percent as a contribution to the Used Fuel Segregated Fund (Used Fuel Fund). In such cases, the Ontario Electricity Financial Corporation (OEFC) would be entitled to a distribution of an equal amount. As a result, OPG recognized 50 percent of the surplus greater than 120 percent in income during the first quarter of 2015. As at March 31, 2016, the Decommissioning Fund was between 100 percent and 120 percent funded and, as such, the balance of the fund recognized on the balance sheet, net of the amount recorded as due to the Province, was equal to the cost estimate of the corresponding liability.

Lower earnings on the Used Fuel Fund, net of the impact of the Bruce Lease Net Revenues Variance Account, also contributed to the decrease in segment earnings in the first quarter of 2016 compared to the same quarter in 2015, primarily due to the impact of weaker market conditions on the performance of the portion of the fund not guaranteed by the Province. This was partially offset by an increase in the CPI, which favourably impacted the CPI-adjusted rate of return for the portion of the fund guaranteed by the Province.

In December 2015, OPG recognized an increase in the Nuclear Liabilities of \$2,330 million, as discussed under the heading, *Regulated – Nuclear Generation Segment*. As a result, higher accretion on nuclear fixed asset removal and nuclear waste management liabilities was recognized during the first quarter of 2016, compared to the same quarter in 2015. The increased accretion expense was largely offset by the impact of the Bruce Lease Net Revenues Variance Account.

# **Regulated – Hydroelectric Segment**

	Three Months Ended March 31	
(millions of dollars) (unaudited)	2016	2015
Revenue <sup>1</sup>	385	394
Fuel expense	79	71
Gross margin	306	323
Operations, maintenance and administration	76	76
Depreciation and amortization	56	60
Income before other gains, interest, and income taxes	174	187
Other gains	(22)	-
Income before interest and income taxes	196	187

During the three months ended March 31, the Regulated – Hydroelectric segment generation revenue included incentive payments of \$1 million in 2016 and \$9 million in 2015 related to the OEB-approved hydroelectric incentive mechanism. The mechanism provides a pricing incentive to OPG to shift hydroelectric production from lower market price periods to higher market price periods, reducing the overall costs to customers.

The increase in segment income before interest and income taxes during the first quarter of 2016, compared to the same quarter in 2015, was largely due to a gain of \$22 million recognized during the first quarter of 2016 to reflect the OEB's January 2016 decision to reverse a portion of an earlier capital cost disallowance related to the Niagara Tunnel project expenditures. The OEB's January 2016 decision was in response to OPG's motion that requested the OEB to review and vary parts of its November 2014 decision that resulted in the original disallowance. The increase in segment earnings was partly offset by a lower gross margin, net of lower depreciation and amortization expense.

Gross margin decreased by \$17 million during the first quarter of 2016, compared to the same period in 2015. The decrease was primarily due to lower hydroelectric incentive mechanism payments and lower revenue from rate riders authorized by the OEB to the end of December 31, 2016 in October 2015. As the riders allowed for the recovery of approved balances in OEB-authorized regulatory variance and deferral accounts, the resulting decrease in revenue was largely offset by lower amortization expense related to the regulatory balances.

The Hydroelectric Availability and Hydroelectric OM&A Expense per MWh for the stations included in the Regulated – Hydroelectric segment were as follows:

		Three Months Ended March 31	
	2016	2015	
Hydroelectric Availability (%)	94.8	91.5	
Hydroelectric OM&A Expense per MWh (\$/MWh)	9.6	9.2	

The Hydroelectric Availability during the first quarter of 2016 increased, compared to the first quarter of 2015, due to a decrease in unplanned outage days for the regulated stations. While station availability and water flows were higher compared to the first quarter of 2015, total generation decreased due to more prevalent SBG conditions in the province, as discussed under the heading, *Electricity Generation*, in the *Highlights* section.

The Hydroelectric OM&A Expense per MWh for the three months ended March 31, 2016 increased, compared to the same period in 2015, as a result of the decrease in generation. During the first quarter of 2016, SBG conditions resulted in lost generation of 1.6 TWh for the Regulated – Hydroelectric segment, compared to 0.3 TWh during the

first quarter of 2015. Adjusting for the foregone production due to SBG conditions in both quarters, the Hydroelectric OM&A Expense per MWh for the segment would have decreased to \$8.0/MWh for the first quarter of 2016, reflecting an improvement compared to \$8.9/MWh for the same quarter in 2015.

# **Contracted Generation Portfolio Segment**

	Three Months Ended March 31	
(millions of dollars) (unaudited)	2016	2015
Revenue	145	123
Fuel expense	12	7
Gross margin	133	116
Operations, maintenance and administration	40	44
Depreciation and amortization	19	17
Accretion on fixed asset removal liabilities	2	2
Property taxes	2	2
ncome from investments subject to significant influence	(8)	(11)
ncome before interest and income taxes	78	62

Income before interest and income taxes from the segment increased by \$16 million during the first quarter of 2016 compared to the same period in 2015. The increase was primarily due to lower earnings in the first quarter of 2015 as a result of a provision made in that quarter related to an IESO audit.

The Hydroelectric Availability, Hydroelectric OM&A Expense per MWh, and the Thermal Equivalent Forced Outage Rate (EFOR) for the Contracted Generation Portfolio segment were as follows:

		Three Months Ended March 31	
	2016	2015	
Hydroelectric Availability (%)	83.9	97.8	
Hydroelectric OM&A Expense per MWh (\$/MWh)	21.4	23.3	
Thermal EFOR (%)	0.9	22.9	

The Hydroelectric Availability during the first quarter of 2016 decreased compared to the same period in 2015, primarily due to an increase in the number of planned outage days at the Harmon GS and Kipling GS on the Lower Mattagami River.

The Hydroelectric OM&A Expense per MWh decreased during the first quarter of 2016 compared to the same quarter in 2015, primarily as a result of a decrease in OM&A expenses for the hydroelectric stations included in the segment. The impact of production lost due to SBG conditions on this metric for this segment was minimal for the first quarters of 2016 and 2015.

The decrease in the Thermal EFOR during the first quarter of 2016, compared to the same quarter in 2015, was primarily due to a fewer number of unplanned outage days at the Lennox GS.

### Services, Trading, and Other Non-Generation Segment

	Three Months Ended March 31		
(millions of dollars) (unaudited)	2016	2015	
Revenue	21	24	
Fuel expense	-	1	
Gross margin	21	23	
Operations, maintenance and administration	4	16	
Depreciation and amortization	7	5	
Accretion on fixed asset removal liabilities	2	2	
Property taxes	3	4	
Accretion on fixed asset removal liabilities Property taxes		23	
ncome (loss) before interest and income taxes	5		

Segment earnings increased by \$9 million during the first quarter of 2016, compared to the same quarter in 2015, reflecting higher OM&A expenses incurred in 2015 partly in relation to the Nanticoke GS prior to OPG's decision to proceed with the decommissioning of the station and lower staffing levels in 2016. Expenditures related to decommissioning activities for the Nanticoke GS incurred during the first quarter of 2016 were charged against a previously established decommissioning provision. Lower electricity trading revenue during the first quarter of 2016, compared to the same quarter in 2015, partially offset the increase in segment earnings.

### LIQUIDITY AND CAPITAL RESOURCES

OPG's primary sources of liquidity and capital are funds generated from operations, bank financing, credit facilities provided by the OEFC, long-term corporate debt, and capital market financing. These sources are used for multiple purposes, including: investment in plants and technologies; major projects; funding obligations such as contributions to the pension fund and the Nuclear Funds; payments under the OPEB plans; expenditures on fixed asset removal and nuclear waste management activities not funded by the Nuclear Funds; and servicing and repaying long-term debt.

Changes in cash and cash equivalents for the three months ended March 31, 2016 and 2015 were as follows:

	Three Months Ended March 31		
(millions of dollars) (unaudited)	2016	2015	
Cash and cash equivalents, beginning of period	464	610	
Cash flow provided by operating activities	366	455	
Cash flow used in investing activities	(310)	(276)	
Cash flow provided by (used in) financing activities	20	(255)	
Net increase (decrease)	76	(76)	
Cash and cash equivalents, end of period	540	534	

For a discussion of cash flow provided by operating activities and FFO Adjusted Interest Coverage, refer to the *Highlights* section.

### **Investing Activities**

Electricity generation is a capital-intensive business. It requires continued investment in plants and technologies to maintain and improve operating performance, including asset reliability, safety and environmental performance, and generating capacity of existing stations, and to invest in the development of new generating stations and other business growth opportunities.

Cash flow used in investing activities during the first quarter of 2016 increased by \$34 million compared to the same quarter in 2015. This increase was primarily due to higher capital expenditures for the Darlington Refurbishment project and for the Peter Sutherland Sr. GS, which commenced construction in the second quarter of 2015.

### **Financing Activities**

Cash flow provided by financing activities was \$20 million during the first quarter of 2016, compared to cash flow used in financing activities of \$255 million during the same quarter in 2015. The cash flow used in financing activities during the first quarter of 2015 was primarily due to long-term debt repayment of \$300 million in the quarter.

OPG maintains a \$1 billion revolving committed bank credit facility, which is divided into two \$500 million multi-year term tranches expiring in May 2020. OPG expects to renew and extend both tranches to May 2021 in the second quarter of 2016. As at March 31, 2016, there were no outstanding borrowings under the bank credit facility.

As at March 31, 2016, OPG maintained \$25 million of short-term, uncommitted overdraft facilities, and a further \$459 million of short-term, uncommitted credit facilities, which support the issuance of the Letters of Credit. OPG uses Letters of Credit to support its supplementary pension plans and for other general corporate purposes. As at March 31, 2016, a total of \$389 million of Letters of Credit had been issued under these facilities. This included \$345 million for the supplementary pension plans, \$43 million for general corporate purposes, and \$1 million related to the operation of the PEC.

The Company has an agreement to sell an undivided co-ownership interest in its current and future accounts receivable to an independent trust. The maximum amount of co-ownership interest that can be sold under this agreement is \$150 million. The agreement expires on November 30, 2016. As at March 31, 2016, there were Letters of Credit outstanding under this agreement of \$150 million, which were issued in support of OPG's supplementary pension plans.

As at March 31, 2016, the Lower Mattagami Energy Limited Partnership (LME) maintained a \$500 million bank credit facility to support the funding requirements for the Lower Mattagami River project, including support for LME's commercial paper program. The facility consists of a \$300 million tranche maturing in August 2020 and a \$200 million tranche maturing in August 2016. As at March 31, 2016, there was external commercial paper of \$249 million outstanding under LME's commercial paper program. There were no amounts outstanding under LME's bank credit facility as at March 31, 2016.

As at March 31, 2016, OPG's long-term debt outstanding was \$5,472 million, including \$323 million due within one year. OPG continues to evaluate debt refinancing alternatives.

### **BALANCE SHEET HIGHLIGHTS**

The following section provides highlights of OPG's unaudited interim consolidated financial position using selected balance sheet data:

	As	s At
(millions of dollars) (unaudited)	March 31 2016	December 31 2015
Property, plant and equipment - net	20,778	20,595
The increase was primarily due to capital expenditures on the Darlington Refurbishment project, partially offset by depreciation expense.		
Nuclear fixed asset removal and nuclear waste management funds (current and non-current portions)	15,272	15,136
The increase was primarily due to earnings on the Nuclear Funds and contributions to the Used Fuel Fund, partially offset by reimbursements of eligible expenditures on nuclear fixed asset removal and nuclear waste management activities.		
Fixed asset removal and nuclear waste management liabilities	20,402	20,169
The increase was primarily a result of accretion expense representing the increase in the liabilities due to the passage of time, partially offset by expenditures on nuclear fixed asset removal and waste management activities.		

### Impact Resulting from Changes in Station End-of-Life Dates Deferral Account

In December 2015, as required by the OEB's previous decisions and orders, OPG applied to the OEB for an accounting order to establish a new deferral account to record the revenue requirement impact on the prescribed nuclear facilities of changes to the Nuclear Liabilities and depreciation expense arising from the changes in the estimated useful lives of OPG's nuclear stations, for accounting purposes, effective December 31, 2015.

In March 2016, the OEB issued its final decision and order establishing the requested account effective January 1, 2016. As at March 31, 2016, OPG recognized a regulatory liability of \$19 million related to the balance in the deferral account.

Further details on changes to estimated useful lives of OPG's nuclear generating stations are found in the 2015 annual MD&A under the section, *Changes in Accounting Policies and Estimates*.

### **Off-Balance Sheet Arrangements**

In the normal course of operations, OPG engages in a variety of transactions that, under US GAAP, are either not recorded in the Company's interim consolidated financial statements or are recorded in the Company's interim consolidated financial statements using amounts that differ from the full contract amounts. Principal off-balance sheet activities for OPG include guarantees and long-term contracts.

### CHANGES IN ACCOUNTING POLICIES AND ESTIMATES

OPG's significant accounting policies are outlined in Note 3 to the audited consolidated financial statements as at and for the year ended December 31, 2015. A discussion of recent accounting pronouncements is included in Note 2 to OPG's interim consolidated financial statements as at and for the three months ended March 31, 2016 under the

heading, *Changes in Accounting Policies and Estimates*. Disclosure regarding OPG's critical accounting policies is included in OPG's 2015 annual MD&A.

### **RISK MANAGEMENT**

The following provides an update to the discussion of the Company's risks and risk management activities included in OPG's 2015 annual MD&A. As such, the disclosure in this section should be read in conjunction with the *Risk Management* section included in the annual MD&A.

### **Operational Risks**

### Risks Associated with Existing Generating Stations

OPG is exposed to variable output from its existing generating stations that could adversely impact its financial performance.

### Pickering Extended Operations to 2024

In January 2016, the Province of Ontario announced its approval of OPG's plan to pursue continued operation of the Pickering GS beyond 2020 up to 2024. The current operating licence for the Pickering GS, which expires in August 2018, was issued in 2013 with the understanding that the station would shut down in 2020. Technical work completed to date in support of continued operations to 2020 will need to be extended and expanded. This includes completion of a Periodic Safety Review and an Integrated Implementation Plan and the submission of these documents to the CNSC as part of the Pickering GS licence renewal application. OPG continues to prepare for the Pickering GS licence renewal application and is conducting component condition assessments to identify the work required to support the extended operation of the station to 2024. There is a risk that the station's extended operation to 2024 may be determined to be uneconomical to pursue.

### Risks Associated with Major Development Projects

The risks associated with the cost, schedule, and technical aspects of the major development projects could adversely impact OPG's financial performance and its corporate reputation.

### Nanticoke Solar Facility

In March 2016, OPG and its partners, SunEdison Canadian Construction LP and Six Nations Development Corporation, were awarded a contract through the IESO's LRP program to develop a 44 MW solar facility at OPG's Nanticoke GS site and adjacent lands. The Nanticoke solar project is subject to risks applicable to the initial stages of project development as outlined in OPG's 2015 annual MD&A in the *Risk Management* section under the heading, *Other Development Projects*. OPG is also exposed to partner non-performance risk for this project. This risk is being mitigated through partnership agreement provisions and by developing contingency plans for project execution.

### **Financial Risks**

### Commodity Markets

Changes in the market price of fuels used to produce electricity can adversely impact OPG's earnings and cash flow from operations.

To manage the risk of unpredictable increases in the price of fuels, the Company has fuel hedging programs, which include fixed price and indexed contracts.

The percentages hedged of OPG's fuel requirements are shown in the following table. These amounts are based on yearly forecasts of generation and supply mix, and as such, are subject to change as these forecasts are updated.

	2016 <sup>1</sup>	2017	2018
Estimated fuel requirements hedged <sup>2</sup>	75%	75%	76%

<sup>1</sup> Includes forecast for the remainder of the year.

<sup>2</sup> Represents the approximate portion of megawatt-hours of expected generation production (and year-end inventory targets) from each type of OPG-operated facility (nuclear and thermal) for which the Company has entered into contractual arrangements or obligations in order to secure the price of fuel. Excess fuel inventories in a given year are attributed to the next year for the purpose of measuring hedge ratios.

### Foreign Exchange

OPG's earnings and cash flows can be affected by movements in the United States dollar relative to the Canadian dollar.

OPG's financial results are exposed to volatility in the Canadian/US foreign exchange rate as fuels and certain supplies and services purchased for generating stations and major development projects are primarily denominated in, or tied to US dollars (USD). To manage this risk, OPG employs various financial instruments such as forwards and other derivative contracts, in accordance with approved risk management policies. As at March 31, 2016, OPG had foreign exchange contracts outstanding with a total notional value of USD \$10 million.

### Trading

### OPG's financial performance can be affected by its trading activities.

OPG's electricity trading operations are closely monitored, with total exposures measured and reported to senior management on a daily basis. The main metric used to measure the financial risk of trading activity is Value at Risk (VaR). VaR is defined as a probabilistic maximum potential future loss expressed in monetary terms for a portfolio based on normal market conditions over a set period of time. For the first quarter of 2016, the VaR utilization ranged between \$0.5 million and \$1.5 million.

### <u>Credit</u>

Deterioration in counterparty credit and non-performance by suppliers and contractors can adversely impact OPG's earnings and cash flows from operations.

OPG manages its exposure to suppliers or counterparties by evaluating their financial condition and negotiating appropriate collateral or other forms of security. OPG's credit exposure relating to energy markets transactions as at March 31, 2016 was \$556 million, including \$541 million to the IESO. Management considers the Company's risk exposure relating to electricity sales through the IESO-administered spot market to be low as the IESO oversees the credit worthiness of all market participants. In accordance with the IESO's prudential support requirements, market participants are required to provide collateral to cover funds that they might owe to the market. Over 95 percent of the remaining \$15 million exposure as at March 31, 2016 was related to investment grade counterparties.

### **RELATED PARTY TRANSACTIONS**

Given that the Province owns all of the shares of OPG, related parties include the Province and other entities controlled by the Province including Hydro One, the IESO, and the OEFC, and jointly controlled entities. The transactions between OPG and related parties are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties.

The related party transactions are summarized below:

	Three Months Ended March 31			
	2	016	2015	
(millions of dollars) (unaudited)	Revenue	Expense	Revenue	Expense
Hydro One				
Electricity sales	2	-	6	-
Services	1	5	1	2
		-		
Province of Ontario				
Decommissioning Fund (deficit) excess funding	-	(177)	-	300
Used Fuel Fund rate of return guarantee	-	(159)	-	579
Gross revenue charges	-	<b>`</b> 31 <sup>´</sup>	-	32
ONFA guarantee fee	-	2	-	2
•				
OEFC				
Gross revenue charges	-	37	-	39
Interest expense on long-term notes	-	42	-	46
Income taxes, net of investment tax credits	-	32	-	71
IESO	4 000	40	1 0 4 0	07
Electricity related revenue	1,363	10	1,342	27
	1,366	(177)	1,349	1,098

The receivable and payable balances between OPG and its related parties are summarized below:

(millions of dollars) (unaudited)	March 31 2016	December 31 2015
Dessivables from related partice		
Receivables from related parties Hydro One		1
IESO	- 541	531
OEFC	541	9
PEC	4 3	3
Province of Ontario	1	1
Accounts payable and accrued charges		
Hydro One	-	1
OEFC	28	51
Province of Ontario	13	20
IESO	1	18

## INTERNAL CONTROLS OVER FINANCIAL REPORTING AND DISCLOSURE CONTROLS

During the most recent interim period, there have been no changes in the Company's policies, procedures and processes that comprise its internal controls over financial reporting that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

### **QUARTERLY FINANCIAL HIGHLIGHTS**

The following tables set out selected financial information from OPG's unaudited interim consolidated financial statements for each of the eight most recently completed quarters.

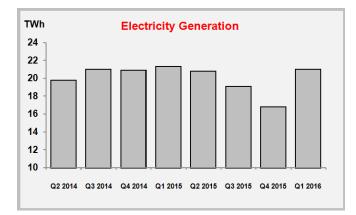
(millions of dollars - except where noted) (unaudited)	March 31 2016	December 31 2015	September 30 2015	June 30 2015
Revenue	1,478	1,312	1,426	1,383
Net income (loss) attributable to the Shareholder	123	(101)	80	189
Net income attributable to non-controlling interest	5	1	5	4
Net income (loss)	128	(100)	85	193
Per common share, attributable to the Shareholder <i>(dollars)</i>	\$0.48	(\$0.39)	\$0.31	\$0.74

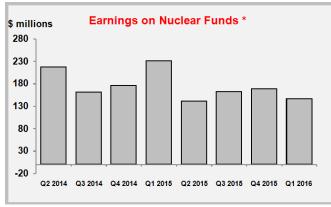
(millions of dollars - except where noted) (unaudited)	March 31 2015	December 31 2014	September 30 2014	June 30 2014
	1,355	1,318	1,160	1,098
Income before extraordinary item attributable to the Shareholder Income before extraordinary item attributable	234	86	118	115
to non-controlling interest	5	4	1	1
Income before extraordinary item	239	90	119	116
Net income attributable to the Shareholder Net income attributable to non-controlling	234	86	361	115
interest	5	4	1	1
Net income	239	90	362	116
Per common share, attributable to the Shareholder <i>(dollars)</i>				
Income before extraordinary item	\$0.91	\$0.34	\$0.46	\$0.45
Net income	\$0.91	\$0.34	\$1.41	\$0.45

### Trends

OPG's quarterly results are affected by changes in grid-supplied electricity demand primarily resulting from variations in seasonal weather conditions, changes in economic conditions, the impact of small scale generation embedded in distribution networks, and the impact of conservation efforts in the province. Weather conditions affect water flows, electricity demand, and prevalence of SBG conditions. Historically, OPG's revenues are higher in the first quarter of a fiscal year as a result of winter heating demands and in the third quarter due to air conditioning and cooling demands. With respect to regulated hydroelectric operations, the financial impact of foregone production due to SBG conditions and the financial impact of differences between forecast water flows reflected in OEB-approved regulated prices and the actual water flows are offset by regulatory variance accounts authorized by the OEB. OPG's financial results are also affected by the earnings on the Nuclear Funds, net of the impact of the Bruce Lease Net Revenues Variance Account.

Filed: 2016-05-27 EB-2016-0152 Exhibit A2-1-1 Attachment 4 Page 45 of 47





<sup>\*</sup>net of regulatory variance account

Additional items that affected net income in certain quarters above are described in OPG's 2015 annual MD&A under the heading, *Quarterly Financial Highlights*.

### SUPPLEMENTARY NON-GAAP FINANCIAL MEASURES

In addition to providing net income and other financial information in accordance with US GAAP, certain non-GAAP financial measures are also presented in OPG's MD&A. These non-GAAP measures do not have any standardized meaning prescribed by US GAAP and, therefore, may not be comparable to similar measures presented by other issuers. OPG utilizes these measures to make operating decisions and assess performance. Readers of the MD&A would utilize these measures in assessing the Company's financial performance from ongoing operations. The Company believes that these indicators are important since they provide additional information about OPG's performance, facilitate comparison of results over different periods, and present measures consistent with the Company's strategies to provide value to the Shareholder and to ensure availability of cost effective funding. These non-GAAP financial measures have not been presented as an alternative to net income, cash flows from operations, or any other measure in accordance with US GAAP, but as an indicator of operating performance.

The definitions of the non-GAAP financial measures are as follows:

(1) **ROE Excluding AOCI** is defined as net income attributable to the Shareholder divided by average equity attributable to the Shareholder excluding AOCI, for the period. ROE Excluding AOCI is measured over a 12-month period and is calculated as follows:

	Twelve M	onths Ended
(millions of dollars – except where noted) (unaudited)	March 31 2016	December 31 2015
ROE Excluding AOCI		
Net income attributable to the Shareholder	291	402
Divided by: Average equity attributable to the Shareholder, excluding AOCI	10,202	10,023
ROE Excluding AOCI (percent)	2.9	4.0

(2) **FFO Adjusted Interest Coverage** is defined as FFO before interest divided by adjusted interest expense. FFO before interest is defined as cash flow provided by operating activities adjusted for interest paid, interest capitalized to fixed and intangible assets, and changes to non-cash working capital balances for the period. Adjusted interest expense is calculated as net interest expense plus interest income, interest capitalized to fixed and intangible assets, interest related to regulatory assets and liabilities, and interest on pension and OPEB projected benefit obligations less expected return on pension plan assets, for the period.

FFO Adjusted Interest Coverage is measured over a 12-month period and is calculated as follows:

	Twelve Months Ende	
	March 31	December 3 <sup>-</sup>
(millions of dollars – except where noted) (unaudited)	2016	2015
FFO before interest		
	1,376	1,465
Cash flow provided by operating activities	261	269
Add: Interest paid		
Less: Interest capitalized to fixed and intangible assets	(110)	(102)
Add: Changes to non-cash working capital balances	255	100
FFO before interest	1,782	1,732
· · · · · · · · · · · · · · · · · · ·	, -	.,
Adjusted interest expense		
Net interest expense	166	180
Add: Interest income	8	9
Add: Interest capitalized to fixed and intangible assets	110	102
Add: Interest related to regulatory assets and liabilities	9	2
Add: Interest on pension and OPEB projected benefit obligations	51	53
less expected return on pension plan assets		
Adjusted interest expense	344	346
FFO Adjusted Interest Coverage (times)	5.2	5.0

(3) **Nuclear Total Generating Cost per MWh** is used to measure the cost performance of OPG's nuclear generating assets. Nuclear TGC per MWh is defined as the total of OM&A expenses of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs, the impact of regulatory variance and deferral accounts, and expenses ancillary to the nuclear electricity generation business), nuclear fuel expense for OPG-operated stations (excluding the impact of regulatory variance and deferral accounts), and capital expenditures of the Regulated – Nuclear Generation segment (excluding Darlington Refurbishment project costs) incurred in the period, divided by OPG's nuclear electricity generation.

	Three Months Ended March 31		
(millions of dollars – except where noted) (unaudited)	2016	2015	
Nuclear TGC			
Regulated – Nuclear Generation OM&A expenses	563	526	
Regulated – Nuclear Generation fuel expense	81	78	
Regulated – Nuclear Generation capital expenditures	249	214	
Less: Darlington Refurbishment project capital and non-capital costs	(205)	(156)	
Add: Regulated – Nuclear Generation OM&A and fuel expenses deferred in regulatory variance and deferral accounts	24	57	
Less: Nuclear fuel expense for non OPG-operated stations	(17)	(17)	
Other adjustments	`(2)́	2 <sup>´</sup>	
Nuclear TGC	693	704	
	000	704	
Nuclear electricity generation (TWh)	12.3	12.2	
Nuclear TGC per MWh (\$/MWh) <sup>1</sup>	56.37	57.68	

<sup>1</sup> Amount may not calculate due to rounding.

(4) Gross margin is defined as revenue less fuel expense.

Additional information about OPG, including its 2015 annual MD&A, and audited annual consolidated financial statements as at and for the year ended December 31, 2015 and notes thereto, can be found on SEDAR at www.sedar.com.

For further information, please contact:

Investor Relations

416-592-6700 1-866-592-6700 investor.relations@opg.com 416-592-4008 1-877-592-4008

Media Relations

www.opg.com www.sedar.com

Filed: 2016-05-27 EB-2016-0152 Exhibit A2-1-1 Attachment 5 Page 1 of 60



# PRESCRIBED FACILITIES OF ONTARIO POWER GENERATION INC.

## FINANCIAL STATEMENTS

**DECEMBER 31, 2015** 

## Independent auditors' report

# To the management of **Ontario Power Generation Inc.**

We have audited the accompanying financial statements of the **Prescribed Facilities of Ontario Power Generation Inc.**, as defined under *Ontario Regulation 53/05* pursuant to the *Ontario Energy Board Act, 1998* as of December 31, 2015 [the "Prescribed Facilities"], which comprise the balance sheets as at December 31, 2015 and 2014, and the statements of income, comprehensive income, cash flows, and changes in excess of assets over liabilities of the Prescribed Facilities for the years then ended, and a summary of significant accounting policies and other explanatory information.

### Management's responsibility for the financial statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with United States generally accepted accounting principles and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

### Auditors' responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform an audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risk of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditors consider internal control relevant to the entity's preparation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained in our audits is sufficient and appropriate to provide a basis for our audit opinion.

### Opinion

In our opinion, the financial statements of the **Prescribed Facilities of Ontario Power Generation Inc.**, which comprise the balance sheets as at December 31, 2015 and 2014 and the statements of income, comprehensive income, cash flows and changes in excess of assets over liabilities of the Prescribed Facilities for the years then ended, and a summary of significant accounting policies and other explanatory information, are prepared, in all material respects, in accordance with United States generally accepted accounting principles.

### -2-

### Basis of accounting and restriction on use

These financial statements are prepared solely for the use of management of **Ontario Power Generation Inc.** and for filing with the Ontario Energy Board as part of the regulatory process and should not be used for any other purpose.

Our auditors' report is intended solely for the management of **Ontario Power Generation Inc.** and for filing with the Ontario Energy Board as part of the regulatory process and should not be used for any other purpose.

[Original Signed by]

ERNST & YOUNG LLP Chartered Professional Accountants Licensed Public Accountants

Toronto, Canada May 27, 2016

# **STATEMENTS OF INCOME**

Years Ended December 31		
(millions of dollars)	2015	2014
Revenue (Notes 3 and 14)	4,600	4,183
Fuel expense (Note 14)	587	575
Gross margin (Note 14)	4,013	3,608
Expenses (Note 14)		
Operations, maintenance and administration (Note 2)	2,549	2,321
Depreciation and amortization (Note 4)	895	650
Accretion on nuclear fixed asset removal and nuclear waste management liabilities ( <i>Note 8</i> )	487	465
Earnings on nuclear fixed asset removal and nuclear waste management funds (Note 8)	(351)	(409)
Regulatory disallowance related to the Niagara Tunnel project (Note 3)	-	77
Property taxes (Note 3)	14	14
	3,594	3,118
Income before other loss, interest, income taxes, and extraordinary item	419	490
Other loss (Note 14)	6	2
Income before interest, income taxes, and extraordinary item	413	488
Net interest expense (Notes 6 and 7)	279	203
	210	200
Income before income taxes and extraordinary item	134	285
Income tax (recovery) expense (Notes 2 and 9)	(15)	27
Income before extraordinary item	149	258
Extraordinary item (Note 3)	-	243
Net income	149	501

## STATEMENTS OF COMPREHENSIVE INCOME

(millions of dollars)	2015 149	2014
	149	
Net income	140	501
Other comprehensive income, net of income taxes		
Recognition of initial pension and other post-employment benefits regulatory asset related to facilities prescribed for rate regulation beginning in 2014 ( <i>Note 3</i> ) <sup>1</sup>	-	184
Reclassification to income of amounts related to pension and other post-employment benefits <sup>2</sup>	-	7
Net gain on derivatives designated as cash flow hedges <sup>3</sup>	1	1
Reclassification to income of losses on derivatives designated as cash flow hedges <sup>3</sup>	11	9
Other comprehensive income	12	201
Comprehensive income	161	702

<sup>1</sup> Net of income tax expenses of nil and \$61 million for 2015 and 2014, respectively.

<sup>2</sup> Net of income tax expenses of nil and \$4 million for 2015 and 2014, respectively.

<sup>3</sup> Net of income tax expenses of nil for 2015 and 2014, respectively.

# **STATEMENTS OF CASH FLOWS**

Years Ended December 31		
(millions of dollars)	2015	2014
Operating activities		
Net income	149	501
Adjust for non-cash items:		
Depreciation and amortization (Note 4)	895	650
Accretion on nuclear fixed asset removal and nuclear waste management liabilities (Note 8)	487	465
Earnings on nuclear fixed asset removal and nuclear waste management funds (Note 8)	(351)	(409)
Pension and other post-employment benefit costs (Note 10)	422	381
Extraordinary item (Note 3)	-	(243)
Deferred income taxes and other accrued charges	(50)	(62)
Provision for used nuclear fuel and low and intermediate level waste, and other expenses (Note 8)	58	<b>`</b> 33 <sup>´</sup>
Regulatory assets and liabilities	(53)	(46)
Provision for materials and supplies	27	37
Regulatory disallowance related to the Niagara Tunnel project (Note 3)	-	77
Other	38	3
	1,622	1,387
Contributions to nuclear fixed asset removal and nuclear waste	(173)	(170)
management funds (Note 8) Expenditures on nuclear fixed asset removal and nuclear waste	(126)	(109)
management (Note 8)		
Reimbursement of expenditures on nuclear fixed asset removal and nuclear waste management (Note 8)	41	42
Contributions to pension funds and expenditures on other post-employment benefits and supplementary pension plans ( <i>Note 10</i> )	(442)	(424)
Net changes to other long-term assets and liabilities	(35)	(63)
Net changes to non-cash working capital balances (Note 17)	(12)	408
Cash flow provided by operating activities	875	1,071
Investing activities		
Investment in property, plant and equipment and intangible assets (Note 14)	(1,112)	(1,075)
Cash flow used in investing activities	(1,112)	(1,075)
Financing activities Net increase (decrease) in long-term debt (Note 6)	211	(75)
		. ,
Cash flow provided by (used in) financing activities	211	(75)
Net decrease in cash and cash equivalents	(26)	(79)
Cash and cash equivalents at beginning of year contributed by facilities		37
prescribed for rate regulation beginning in 2014 (Note 2)		
Cash and cash equivalents, beginning of year	396	438
Cash and cash equivalents, end of year	370	396
Cash and Cash equivalents, end of year	3/0	290

# **BALANCE SHEETS**

As at December 31		
(millions of dollars)	2015	2014
Assets		
Current assets		
Cash and cash equivalents (Note 2)	370	396
Receivables from related parties (Notes 2 and 15)	497	436
Other accounts receivable and prepaid expenses (Note 2)	96	62
Nuclear fixed asset removal and nuclear waste management funds (Notes 8 and 14)	8	13
Fuel inventory (Notes 2 and 14)	304	298
Materials and supplies (Notes 2 and 14)	95	93
Regulatory assets (Note 5)	628	167
	1,998	1,465
Property, plant and equipment (Notes 2, 4, and 14)	17,953	17,303
Less: accumulated depreciation	5,580	5,157
	12,373	12,146
Intangible assets (Notes 2, 4, and 14)	126	123
Less: accumulated amortization	113	108
	13	15
Other assets		
Nuclear fixed asset removal and nuclear waste management funds (Notes 8 and 14)	7,715	7,227
Long-term materials and supplies (Notes 2 and 14)	334	333
Regulatory assets (Note 5)	4,851	6,507
Other long-term assets	28	22
	12,928	14,089
	27,312	27,715

## **BALANCE SHEETS**

As at December 31		
(millions of dollars)	2015	2014
Liabilities		
Current liabilities		
Accounts payable and accrued charges (Note 2)	911	909
Due to Ontario Power Generation Inc. (Notes 2, 6, 7, and 14)	1,392	1,489
Income taxes payable (Notes 2 and 3)	90	36
Regulatory liabilities (Note 5)	26	5
	2,419	2,439
Long-term debt (Note 6)	5,446	5,235
Other liabilities		
Nuclear fixed asset removal and nuclear waste management liabilities (Notes 8 and 14)	8,845	8,843
Pension liabilities (Note 10)	2,467	3,254
Other post-employment benefit liabilities (Note 10)	2,665	2,616
Long-term accounts payable and accrued charges (Note 2)	120	133
Deferred income taxes (Note 9)	787	788
Regulatory liabilities (Note 5)	34	39
	14,918	15,673
Excess of assets over liabilities	4.500	
Net capital (Note 2)	4,583	4,434
Accumulated other comprehensive loss (Note 2)	(54)	(66)
	4,529	4,368
	27,312	27,715

Commitments and Contingencies (Notes 9, 10, and 13)

See accompanying notes to the financial statements

On behalf of Ontario Power Generation Inc.

[Original signed by]

Ken Hartwick

Senior Vice President, Finance, Strategy, Risk and Chief Financial Officer

# STATEMENTS OF CHANGES IN EXCESS OF ASSETS OVER LIABILITIES

Years Ended December 31		
(millions of dollars)	2015	2014
Net capital		
Balance at beginning of year	4,434	3,050
Net assets at beginning of year contributed by facilities prescribed for rate regulation in 2014 (Notes 2, 4, 6, 9, and 10)	-	883
	4,434	3,933
Net income	149	501
Balance at end of year	4,583	4,434
Accumulated other comprehensive loss, net of income taxes		
Balance at beginning of year	(66)	(76)
Net assets at beginning of year contributed by facilities prescribed for rate regulation beginning in 2014 <sup>1</sup> ( <i>Notes 2, 9, and 10</i> )	-	(191)
Other comprehensive income	12	201
Balance at end of year	(54)	(66)
	4,529	4,368

<sup>1</sup> Net of income tax expenses of nil and \$65 million for 2015 and 2014, respectively.

## NOTES TO THE FINANCIAL STATEMENTS

For the years ended December 31, 2015 and 2014

### 1. DESCRIPTION OF THE BUSINESS

*Ontario Regulation 53/05*, a regulation pursuant to the *Ontario Energy Board Act, 1998*, provides that, effective April 1, 2005, Ontario Power Generation Inc. (OPG) receives regulated prices for electricity generated from Sir Adam Beck 1, 2 and Pump generating station (GS), DeCew Falls 1 and 2, and R.H. Saunders hydroelectric facilities, and Pickering and Darlington nuclear facilities (collectively, the Previously Regulated Facilities). Effective April 1, 2008, the regulated prices for the production from the Previously Regulated Facilities are determined by the Ontario Energy Board (OEB). In November 2013, the Province of Ontario (the Province) amended *Ontario Regulation 53/05* to prescribe for rate regulation by the OEB 48 of OPG's previously unregulated hydroelectric generating facilities (the Newly Regulated Hydroelectric Facilities) beginning in 2014. The amended regulation requires the OEB to establish regulated prices for the production from these facilities. The Previously Regulated Facilities comprised the business prior to January 1, 2014. Both the Previously Regulated Facilities and the Newly Regulated Hydroelectric Facilities) comprise the business starting on January 1, 2014.

The OEB is a self-funding Crown corporation. Its mandate and authority come from the *Ontario Energy Board Act*, *1998*, the *Electricity Act*, *1998*, and a number of other provincial statutes. The OEB is an independent, quasi-judicial tribunal that reports to the Legislature of the Province through the Minister of Energy. It regulates market participants in Ontario's natural gas and electricity industries and carries out its regulatory functions through public hearings and other more informal processes such as consultations.

The Prescribed Facilities have no separate legal status and are a part of OPG. OPG was incorporated on December 1, 1998 pursuant to the *Business Corporations Act* (Ontario) and is wholly owned by the Province. OPG is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity.

### 2. BASIS OF PRESENTATION

These financial statements were prepared in accordance with United States generally accepted accounting principles (US GAAP). These financial statements have been prepared primarily through specific identification of assets, liabilities, accumulated other comprehensive income (AOCI), revenues, expenses, extraordinary items, and other comprehensive income (OCI) of OPG and the Nuclear Waste Management Organization (NWMO) that relate to the Prescribed Facilities. These financial statements include information for the Newly Regulated Hydroelectric Facilities starting on January 1, 2014, as these facilities became rate regulated in that year. All dollar amounts are presented in Canadian dollars.

OPG's financial statements are prepared in accordance with US GAAP and the rules and regulations of the United States Securities and Exchange Commission for annual financial statements, as required by *Ontario Regulation 395/11*, as amended, a regulation under the *Financial Administration Act* (Ontario).

As OPG primarily maintains pooled bank accounts for the use of all of its operations, OPG's cash balance cannot be assigned specifically to the Prescribed Facilities. OPG's cash balance that could not be specifically assigned was allocated to the Prescribed Facilities based on the cash receipts from the Independent Electricity System Operator (IESO) in the month of December of the reporting year. The NWMO's cash balance was directly assigned to the Prescribed Facilities.

Accounts receivable from related parties include the receivable balance from the IESO attributable to the Prescribed Facilities. The portion of OPG's receivable balance from the IESO was attributed to the Prescribed Facilities using

direct assignment. The majority of the other accounts receivable and prepaid expenses balance reported in the Prescribed Facilities' financial statements represents a direct assignment of OPG's balances based on the nature of the underlying items. Fuel inventory, current and long-term materials and supplies, property, plant and equipment (PP&E), intangible assets and related fuel and depreciation and amortization expenses represent a direct assignment of OPG's respective balances to the Prescribed Facilities. The full balance of OPG's current and non-current regulatory assets and regulatory liabilities representing variance and deferral accounts authorized by the OEB and related amortization expense are reflected in the Prescribed Facilities' financial statements, as discussed in Note 5.

The liabilities for pension and other post-employment benefits (OPEB) and related costs, regulatory assets and AOCI and OCI balances were determined using a combination of specific identification and allocation to the Prescribed Facilities of the respective amounts in OPG's financial statements, as discussed in Note 10.

The nuclear fixed asset removal and nuclear waste management liabilities (Nuclear Liabilities) that relate to the Prescribed Facilities were determined using a combination of specific identification and allocation of amounts in OPG's financial statements, as discussed in Note 8. The associated accretion expense was computed directly on the balance of the liabilities attributed to the Prescribed Facilities. The nuclear fixed asset removal and nuclear waste management funds, including the current portion, and associated earnings were directly assigned to the Prescribed Facilities, as described in Note 8.

The Prescribed Facilities' short-term debt and long-term debt balances represent amounts owing to OPG. The derivation of debt balances was based on the methodology approved in the OEB's decisions and orders under case numbers EB-2013-0321 and EB-2010-0008, which established regulated prices for the generation from the Prescribed Facilities effective November 1, 2014 and March 1, 2011, respectively (collectively, the OEB Decisions), as discussed in Notes 6 and 7. For the purposes of determining the long-term debt balance, this methodology considers the portion of OPG's project-specific long-term debt incurred to finance the net PP&E and intangible assets of the Prescribed Facilities and an allocation of OPG's non-project-specific long-term debt. This allocation is primarily based on the net PP&E and intangible asset balances of the Prescribed Facilities relative to those of OPG. The Prescribed Facilities' accrued interest payable represents the portion of OPG's accrued interest payable for project-specific and non-project-specific long-term debt attributed to the Prescribed Facilities. The accrued interest payable is included in accounts payable and accrued charges.

The short-term debt was derived based on the methodology approved in the OEB Decisions that considers a portion of OPG's short-term borrowings, if any, including those related to OPG's securitized receivables, attributed to the Prescribed Facilities on the basis of construction and development in progress and non-cash working capital balances of the Prescribed Facilities relative to those of OPG. OPG's project-specific short-term debt is directly assigned on the basis of the assets it was incurred to finance.

The net interest expense on the Prescribed Facilities' short-term and long-term debt was determined using the methodology approved by the OEB Decisions, as discussed in Notes 6 and 7.

Amounts reported as due to Ontario Power Generation Inc. represent the impact of implicit transactions between the Prescribed Facilities and OPG resulting from the methodologies and assumptions underlying the balances of assets, liabilities and AOCI and the amounts of revenues, expenses and OCI reported in these financial statements.

Income taxes payable/recoverable, deferred income tax assets and liabilities and income tax expense, discussed in Note 9 and the regulatory asset for deferred income taxes, discussed in Note 5 were determined as though the Prescribed Facilities were a separate taxable entity and were calculated based on the financial position and results of operations of the Prescribed Facilities reported in these financial statements.

The majority of the long-term accounts payable and accrued charges balance reported in the Prescribed Facilities' financial statements represents a direct assignment of OPG's balances based on the nature of the underlying items.

The financial impact of OPG's hedging instruments recorded in OPG's AOCI and OCI is attributed to the Prescribed Facilities on the basis of the underlying hedged items and is reflected as components of AOCI and OCI reported in these financial statements.

Net capital of the Prescribed Facilities represents the excess of assets over liabilities, excluding AOCI, as reported in these financial statements. As at January 1, 2014, net capital increased by \$883 million to reflect the net assets contributed by the Newly Regulated Hydroelectric Facilities to the Prescribed Facilities. The Prescribed Facilities' AOCI decreased by \$191 million as at January 1, 2014 to reflect the net assets contributed by the Newly Regulated Hydroelectric Facilities and allocation of specific identification and allocation of the respective assets, liabilities and AOCI as at December 31, 2013 reported in OPG's consolidated financial statements, based on the methods used to derive the corresponding balances of the Previously Regulated Facilities presented in the audited consolidated financial statements of OPG's Prescribed Facilities as at and for the year ended December 31, 2012, and are inclusive of the select assets and liabilities of the Newly Regulated Hydroelectric Facilities identified in the audited Schedule of Select Assets and Liabilities of OPG's Newly Regulated Hydroelectric Facilities as at December 31, 2013 filed by OPG with the OEB under case number EB-2013-0321.

Operations, maintenance and administration (OM&A) expenses primarily consist of expenses specific to the Prescribed Facilities and a portion of OPG's corporate support services and centrally held expenses. OPG's corporate support services and centrally held OM&A expenses were attributed to the Prescribed Facilities consistent with the methodology outlined in independent cost allocation studies submitted to the OEB in OPG's applications under case numbers EB-2013-0321 and EB-2010-0008, the results of which were reflected in the regulated prices established by the OEB in those proceedings. According to this methodology, OPG's corporate support services and centrally-held OM&A expenses were directly assigned to the Prescribed Facilities based on specific identification, where possible. Where specific identification was not possible, expenses were allocated based on cost drivers exhibiting a causal relationship.

Accounts payable and accrued charges associated with OPG's OM&A expenses specific to the Prescribed Facilities were directly assigned to the Prescribed Facilities. Accounts payable and accrued charges associated with OPG's corporate support services and centrally held OM&A expenses were attributed to the Prescribed Facilities on the same basis as the expenses.

The statements of cash flows were prepared using methodologies and assumptions that are consistent with those underlying the balances of assets, liabilities and AOCI and the amounts of revenues, expenses, extraordinary items, and OCI reported in these financial statements. Net assets contributed by the Newly Regulated Hydroelectric Facilities as of January 1, 2014 included cash and cash equivalents of \$37 million.

As a result of the above basis of presentation, the statements of income, statements of comprehensive income, statements of cash flows, balance sheets, and statements of changes in excess of assets over liabilities of the Prescribed Facilities will not be identical to the financial position and results of operations that would have resulted had the Prescribed Facilities historically operated on a standalone basis. These financial statements have been prepared solely for the use of OPG's management and for filing with the OEB, and are considered by management to be a reasonable representation of the financial results of the Prescribed Facilities for the purpose of filing with the OEB. The methodologies and assumptions used to attribute OPG's amounts to the Prescribed Facilities in these financial statements are considered by management to be reasonable and consistent with the above purpose.

The consolidated financial statements of OPG as at and for the year ended December 31, 2015, including the 2014 comparative period, have been prepared in accordance with US GAAP and filed with the Ontario Securities Commission.

Filed: 2016-05-27 EB-2016-0152 Exhibit A2-1-1 Attachment 5 Page 13 of 60

### 3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

### Consolidation

The financial statements of the Prescribed Facilities include amounts attributable to the Prescribed Facilities in the accounts of OPG and a variable interest entity (VIE), the NWMO, where OPG is the primary beneficiary. All significant intercompany balances and intercompany transactions have been eliminated on consolidation.

### **Variable Interest Entities**

OPG performs ongoing analysis to assess whether it holds any VIEs and consolidates VIEs of which it is deemed to be the primary beneficiary. Amounts attributable to the Prescribed Facilities in the accounts of OPG's VIEs are reflected in the financial statements of the Prescribed Facilities. The primary beneficiary of a VIE has both the power to direct the activities of the entity that most significantly impact its economic performance and the obligation to absorb losses of the entity that could potentially be significant to the entity. In circumstances where OPG is not deemed to be the primary beneficiary, the VIE is not recorded in either OPG or the Prescribed Facilities' financial statements.

In 2002, OPG and other Canadian nuclear waste producers established the NWMO in accordance with the *Nuclear Fuel Waste Act* (NFWA). The primary long-term mandate of the NWMO is to implement an approach to address the long-term management of used nuclear fuel. In addition to the above mandate, the NWMO provides project management services for proposed OPG's Deep Geologic Repository (DGR) project for the long-term management of low and intermediate level waste (L&ILW) and other nuclear lifecycle liability management services. OPG has the majority of voting rights at the NWMO Board of Directors' and members' level. The NFWA requires the nuclear fuel waste owners to establish and make payments into trust funds for the purpose of funding the implementation of the long-term nuclear used fuel management plan. OPG provides over 90 percent of NWMO's funding, primarily towards the design and implementation of Canada's Adaptive Phased Management plan for the long-term management of nuclear used fuel. As a result, OPG is expected to absorb a majority of the NWMO, of which it is the primary beneficiary. Accordingly, the applicable amounts in the accounts of the NWMO, after elimination of all significant intercompany transactions, are consolidated by OPG and therefore the Prescribed Facilities.

### **Use of Management Estimates**

The preparation of financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses for the reporting periods. Management evaluates these estimates on an ongoing basis based upon historical experience, current conditions, and assumptions believed to be reasonable at the time the assumption is made, with any adjustments recognized in the period incurred. Significant estimates are included in the determination of pension and OPEB balances, asset retirement obligations, income taxes (including deferred income taxes), contingencies, regulatory assets and liabilities, valuation of derivative instruments and investments in segregated funds, depreciation and amortization expenses, and inventories. Actual results may differ significantly from these estimates. The preparation of the financial statements of the Prescribed Facilities also includes significant estimates in determining the allocation of OPG's balances to the Prescribed Facilities.

### **Cash and Cash Equivalents and Short-Term Investments**

Cash and cash equivalents include an allocated portion of OPG's cash on deposit and money market securities with a maturity of less than 90 days on the date of purchase. All other money market securities with a maturity on the date of purchase that is greater than 90 days, but less than one year, are recorded as short-term investments and classified as current assets. These securities are valued at the lower of cost and market.

### **Inventories**

Inventories, consisting of fuel and materials and supplies, are measured at the lower of cost and market. Cost is determined as weighted average cost for fuel inventory and average cost for materials and supplies.

### PP&E, Intangible Assets and Depreciation and Amortization

PP&E and intangible assets are recorded at cost. Interest costs incurred during construction and development are capitalized as part of the cost of the asset based on the interest rates on OPG's long-term debt. Expenditures for replacements of major components are capitalized.

Depreciation and amortization rates for the various classes of assets are based on their estimated service lives. Any asset removal costs that have not been specifically provided for in current or previous periods are charged to OM&A expenses when incurred. Repairs and maintenance costs are also expensed when incurred.

PP&E are depreciated on a straight-line basis, except for computers and transport and work equipment, which are mostly depreciated on a declining balance basis. Intangible assets, which consist of major application software, are amortized on a straight-line basis.

As at December 31, 2015, the depreciation and amortization periods of PP&E and intangible assets were as follows:

Nuclear generating stations and major components	15 to 59 years <sup>1</sup>
Hydroelectric generating stations and major components	10 to 100 years
Administration and service facilities	10 to 50 years
Computers, and transport and work equipment assets – declining balance	12% to 40% per year
Major application software	5 years
Service equipment	5 to 10 years

<sup>1</sup> As at December 31, 2015, the end of station life for depreciation purposes for the Darlington and Pickering nuclear generating stations ranged between 2020 and 2052. Major components are depreciated over the lesser of the station life and the life of the components.

### **Asset Impairment**

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The review is based on the presence of impairment indicators such as the future economic benefit of the assets and external market conditions. The net carrying amount of assets is considered impaired if it exceeds the sum of the estimated undiscounted cash flows expected to result from the asset's use and eventual disposition. In cases where the sum of the undiscounted expected future cash flows is less than the carrying amount, an impairment loss is recognized. This loss equals the amount by which the carrying amount exceeds the fair value. Fair value is determined using expected discounted cash flows when quoted market prices are not available. The impairment is recognized in income in the period in which it is identified.

### **Rate Regulated Accounting**

US GAAP recognizes that rate regulation can create economic benefits and obligations that are required by the regulator to be obtained from, or settled with, the customers. When OPG assesses that there is sufficient assurance that incurred costs in respect of the Prescribed Facilities will be recovered in the future, those costs are deferred and reported as a regulatory asset in the consolidated financial statements of OPG and, as applicable, the Prescribed Facilities. When OPG is required to refund amounts to customers in the future in respect of the Prescribed Facilities, including amounts related to costs that have not been incurred and for which the OEB has provided recovery through regulated prices, a regulatory liability is recorded.

Certain of the regulatory assets and liabilities recognized in the Prescribed Facilities' financial statements relate to variance and deferral accounts authorized by the OEB, including those authorized pursuant to *Ontario Regulation 53/05*. These accounts typically capture differences between actual costs and revenues and the corresponding

forecast amounts approved by the OEB in setting regulated prices, or record the impact of items not reflected in the approved regulated prices. The measurement of these regulatory assets and liabilities is subject to certain estimates and assumptions, including assumptions made in the interpretation of *Ontario Regulation 53/05* and the OEB's decisions. The estimates and assumptions made in the interpretation of the regulation and the OEB's decisions are reviewed as part of the OEB's regulatory process.

Regulatory assets and liabilities for variance and deferral account balances approved by the OEB for inclusion in regulated prices are amortized based on approved recovery or repayment periods. Disallowed balances are charged to operations in the period that the OEB's decision is issued.

Regulatory assets and liabilities for variance and deferral account balances approved by the OEB are classified as current if they are expected to be recovered from, or refunded to, customers within 12 months of the end of the reporting period, based on recovery or repayment periods authorized by the OEB. All other regulatory asset and liability balances are classified as non-current on the balance sheets.

In addition to regulatory assets and liabilities for variance and deferral accounts, OPG recognizes regulatory assets and liabilities for unamortized amounts recorded in AOCI in respect of pension and OPEB obligations, and deferred income taxes, in order to reflect the expected recovery or repayment of amounts attributed to the Prescribed Facilities through future regulated prices charged to customers. There are measurement uncertainties related to these balances due to the assumptions made in the determination of pension and OPEB obligations and deferred income taxes attributed to the Prescribed Facilities.

The regulatory asset for unamortized pension and OPEB amounts recorded in AOCI has reflected the OEB's use, since April 1, 2008, of the accrual basis of accounting for including pension and OPEB amounts in approved regulated prices for OPG. This is also the manner in which these costs are recognized in the financial statements of OPG and the Prescribed Facilities. Therefore, unamortized amounts in respect of OPG's pension and OPEB plans that are recognized in AOCI generally have not been reflected in the regulated prices until they are reclassified from AOCI and recognized as amortization components of the benefit costs for these plans. The regulatory asset is reversed as underlying unamortized balances are amortized as components of the benefit cost.

In setting OPG's regulated prices effective November 1, 2014 under case number EB-2013-0321, the OEB limited amounts for pension and OPEB costs allowed in the approved revenue requirements to the regulated business portion of OPG's cash expenditures on its pension and OPEB plans for the Prescribed Facilities. It is OPG's position that this decision by the OEB does not constitute a change in the basis of recovery for OPG's pension and OPEB costs. This position is based on the OEB's establishment of the Pension & OPEB Cash Versus Accrual Differential Deferral Account pursuant to its November 2014 decision, as discussed below, and, the expectation expressed by the OEB in that decision that a transition from the accrual basis of recovery for OPG, if required, would be addressed in a future OPG rate proceeding, informed by the outcome of a future generic OEB proceeding related to the regulatory treatment and recovery of pension and OPEB costs. Accordingly, OPG continues to believe that there is sufficient likelihood that unamortized pension and OPEB amounts that have not yet been reclassified from AOCI will be included in future regulated prices or an OEB-authorized deferral or variance account as they are recognized in benefit costs. Therefore, OPG has continued to recognize a regulatory asset for these unamortized amounts, and also has recognized a regulatory asset for the balance of the Pension & OPEB Cash Versus Accrual Differential Deferral Account, which records the difference between OPG's actual pension and OPEB costs for the regulated business determined on an accrual basis and the corresponding actual expenditures for these plans. In May 2015, under case number EB-2015-0040, the OEB began a consultation process to develop standard principles to guide its future review of pension and OPEB costs of rate regulated utilities in the electricity and natural gas sectors, including establishing appropriate regulatory mechanisms for cost recovery. OPG is participating in the consultation process, which is ongoing.

If, in a future proceeding, the OEB decides that the recovery basis for OPG's pension and OPEB amounts for OPG's Prescribed Facilities should be changed, OPG may be required to adjust the regulatory assets for unamortized

pension and OPEB amounts recorded in AOCI and for the Pension & OPEB Cash Versus Accrual Differential Deferral Account.

See Notes 5, 6, 7, 9 and 10 to these financial statements for additional disclosures related to the OEB's decisions, regulatory assets and liabilities, and rate regulated accounting.

### Nuclear Fixed Asset Removal and Nuclear Waste Management Liabilities

The Prescribed Facilities' financial statements recognize asset retirement obligations for nuclear fixed asset removal and nuclear waste management, discounted for the time value of money. OPG estimates both the amount and timing of future cash expenditures based on the plans for nuclear fixed asset removal and nuclear waste management. The liabilities are initially recorded at their estimated fair value, which is based on a discounted value of the expected costs to be paid.

On an ongoing basis, the Nuclear Liabilities are increased by the present value of the incremental (variable) cost portion for the nuclear waste generated each year, with the corresponding amounts charged to operating expenses. Variable expenses relating to low and intermediate level nuclear waste are charged to OM&A expenses. Variable expenses relating to the management and storage of nuclear used fuel are charged to fuel expense. The liabilities may also be adjusted due to any changes in the estimated amount or timing of the underlying future cash flows, with any resulting changes in the related asset retirement costs capitalized as part of the carrying amount of the related fixed assets. A comprehensive reassessment of all underlying assumptions and baseline cost estimates for the Nuclear Liabilities is performed periodically. Changes in the Nuclear Liabilities resulting from changes in assumptions or estimates that impact the amount or timing of the originally estimated undiscounted cash flows are recorded as an adjustment to the liabilities. Any resulting changes in the related asset retirement of the related asset retirement costs are capitalized as part of the carrying amount of nuclear fixed assets. Upon settlement of the liabilities, a gain or loss would be recorded.

Accretion arises because the Nuclear Liabilities are reported on a net present value basis. Accretion expense is the increase in the carrying amount of the liabilities due to the passage of time.

The asset retirement cost is capitalized by increasing the carrying value of the related fixed assets. The capitalized cost is depreciated over the remaining service life of the related fixed assets and is included in depreciation and amortization expenses.

OPG has no legal obligation associated with the decommissioning of its hydroelectric generating facilities, and the costs cannot be reasonably estimated because of the long service life of these assets. With either maintenance efforts or rebuilding, the water control structures are assumed to be used for the foreseeable future. Accordingly, neither OPG's nor the Prescribed Facilities' financial statements recognize a liability for the decommissioning of hydroelectric generating facilities.

### Nuclear Fixed Asset Removal and Nuclear Waste Management Funds

Pursuant to the Ontario Nuclear Funds Agreement (ONFA) between OPG and the Province, OPG established a Used Fuel Segregated Fund (Used Fuel Fund) and a Decommissioning Segregated Fund (Decommissioning Fund) (together the Nuclear Funds). The Used Fuel Fund is intended to fund expenditures associated with the long-term management of radioactive used nuclear fuel bundles, while the Decommissioning Fund was established to fund the future costs of nuclear fixed asset removal, long-term L&ILW management, and certain costs for used fuel storage incurred after the nuclear stations are shut down. OPG maintains the Nuclear Funds in third-party custodial and trust accounts that are segregated from the rest of OPG's assets. The segregated funds include amounts associated with the nuclear stations of the Prescribed Facilities. Separate segregated funds are not maintained for the Prescribed Facilities.

The investments in the Nuclear Funds and the corresponding amounts payable to/receivable from the Province are classified as held-for-trading. The Nuclear Funds are measured at fair value based on the bid prices of the

underlying equity and fixed income securities, and, in the case of the alternative investment portfolio, using appropriate valuation techniques as outlined in Note 12 to these financial statements, with realized and unrealized gains and losses recognized in the statements of income.

### **Revenue Recognition**

All of OPG's electricity generation is offered into the real-time energy spot market administered by the IESO. Revenue is recognized as electricity is generated and metered to the IESO and is directly assigned to the Prescribed Facilities on the basis of the underlying generation of the nuclear and regulated hydroelectric facilities.

Energy revenue generated from the Prescribed Facilities is based on regulated prices determined by the OEB that have to date included a base regulated price and rate riders for the recovery or repayment of approved variance and deferral account balances. The following are the OEB-authorized regulated prices for electricity generated from the Prescribed Facilities in effect during the years ended December 31:

	20	15	2014		
<u>(</u> \$/MWh)	July 1 to December 31	January 1 to June 30	November 1 to December 31	January 1 to October 31	
Regulated – Nuclear Generation					
Base regulated price	59.29	59.29	59.29	51.52	
Rate riders	12.17 <sup>1</sup>	1.33	4.18	4.18	
	71.46	60.62	63.47	55.70	
Regulated – Hydroelectric					
Hydroelectric generating stations prescribed for rate regulation prior to 2014					
Base regulated price	40.20	40.20	40.20	35.78	
Rate riders	<b>9.23</b> <sup>1</sup>	6.04	2.02	2.02	
	49.43	46.24	42.22	37.80	
Newly Regulated Hydroelectric Facilities					
Base regulated price	41.93	41.93	41.93	n/a	
Rate rider	<b>3.19</b> <sup>1</sup>	-		n/a	
	45.12	41.93	41.93	n/a	

<sup>1</sup> The increase in the 2015 rate riders effective July 1, 2015 was implemented by the OEB effective October 1, 2015 until December 31, 2016. As such, in addition to the 2015 rate riders shown in the table, the OEB authorized interim period rate riders for the period from October 1, 2015 to December 31, 2016 to allow for the recovery of the increase in the riders for the period from July 1, 2015 to September 30, 2015. The revenue from the new riders for the July 1, 2015 to September 30, 2015 period was accrued in 2015. The nuclear interim rate rider is \$2.17/MWh and the regulated hydroelectric interim rate rider is \$0.64/MWh. These riders are included in the total rate riders shown in the table.

The base regulated prices in effect during 2015 and 2014 were determined by the OEB using a two-year forecast cost of service methodology based on revenue requirements, taking into account a forecast of production and operating costs for the regulated facilities and a return on rate base. Rate base is a regulatory construct that, for OPG, represents the average net level of investment in regulated fixed and intangible assets in service and an allowance for working capital.

The base regulated prices for the Previously Regulated Facilities in effect prior to November 1, 2014 were established by the OEB's order issued in April 2011 under case number EB-2010-0008, with an effective date of March 1, 2011. The base regulated prices for the Previously Regulated Facilities effective November 1, 2014 were established by the OEB's order issued in December 2014 on OPG's application for new regulated prices under case number EB-2013-0321. In that proceeding, effective November 1, 2014, the OEB also established regulated prices for the Newly Regulated Hydroelectric Facilities that were prescribed for rate regulation beginning in 2014. Prior to

November 1, 2014, the revenue for the electricity generation from the Newly Regulated Hydroelectric Facilities was based on the Ontario electricity spot market price and is reported as such in these financial statements.

Rate riders for OPG have been established to recover or repay approved balances in OEB-authorized regulatory variance and deferral accounts. The rate riders in effect during 2015 included the riders established by the OEB's December 2014 order under case number EB-2013-0321, as well as the riders authorized by the OEB's October 2015 order, under case number EB-2014-0370, on OPG's 2014 application to recover the December 31, 2014 balances in most of the authorized variance and deferral accounts. The rate riders established by the December 2014 order were in effect from January 1, 2015 to December 31, 2015. The rate riders authorized by the October 2015 order are in effect from July 1, 2015 to December 31, 2016. The rate riders in effect during 2014 reflected the terms of an OEB-approved settlement agreement between OPG and intervenors under case number EB-2012-0002, which provided for the recovery or repayment of most OEB-authorized regulatory variance and deferral account balances as at December 31, 2012. OPG's variance and deferral accounts are discussed in Note 5 to these financial statements.

Revenues from the regulated hydroelectric facilities are subject to the OEB-approved hydroelectric incentive mechanism. The mechanism provides a pricing incentive to OPG to shift hydroelectric production from lower market price periods to higher market price periods, reducing the overall costs to ratepayers.

The Prescribed Facilities' revenue also includes revenue from heavy water sales, detritiation services, isotope sales, and ancillary services. Revenues from these activities are recognized as services are provided, or as products are delivered, and are directly assigned to the Prescribed Facilities based on their underlying nature.

### **Derivatives**

All derivatives attributed to the Prescribed Facilities, including embedded derivatives that must be separately accounted for, generally are classified as held-for-trading and recorded at fair value in the balance sheets. Transaction costs are expensed as incurred for financial instruments classified or designated as held-for-trading.

Derivatives qualify for hedge accounting if they meet stringent documentation requirements, and if the derivative instrument that is designated as a hedge is expected to effectively hedge the identified risk throughout the life of the hedged item. At the inception of a hedging relationship, OPG documents the relationship between the hedging instrument and the hedged item, its risk management objective, and its strategy for undertaking the hedge. A documented assessment is made, both at the inception of a hedge and on an ongoing basis, of whether or not the derivatives that are used in hedging transactions are highly effective in offsetting the changes attributable to the hedged risks in the fair values or cash flows of the hedged items.

### **Fair Value Measurements**

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly arm's-length transaction between market participants at the measurement date. Fair value measurements are required to reflect the assumptions that market participants would use in pricing an asset or liability based on the best available information. These assumptions include the risks inherent in a particular valuation technique, such as a pricing model, and the risks inherent in the inputs to the model. OPG uses a fair value hierarchy, grouping assets and liabilities into three levels based on the relative objectivity of the inputs used to measure fair value, with Level 1 representing the most objective. Refer to Note 12 for a discussion of fair value measurements and the fair value hierarchy.

### **Research and Development**

Research and development costs are expensed as incurred. Research and development costs incurred to discharge long-term obligations, such as the Nuclear Liabilities, for which specific provisions have already been made are charged to the related liability.

### Leases

Leases are evaluated and classified as either operating or capital leases for financial reporting purposes. Capital leases, which transfer substantially all of the risks and benefits incidental to ownership of the leased item, are capitalized at the inception of the lease at the fair value of the leased property or, if lower, at the present value of the minimum lease payments. Capital leases are depreciated over the shorter of the estimated useful life of the asset and the lease term.

Leases where the lessor retains substantially all the risks and benefits incidental to ownership of the asset are classified as operating leases. Operating lease payments, other than contingent rentals, are recognized as an expense in the statements of income on a straight-line basis over the lease term. Where the amount of rent expense recognized is different from the actual operating lease payment, other than contingent rentals, the difference is deferred and included as assets or liabilities on the balance sheets.

### Pension and Other Post-Employment Benefits

OPG's post-employment benefit programs consist of a contributory defined benefit registered pension plan, a defined benefit supplementary pension plan, other post-retirement benefits (OPRB) including group life insurance and health care benefits, and long-term disability (LTD) benefits. Post-employment benefit programs are also provided by the NWMO, which is consolidated into OPG's and the Prescribed Facilities' financial results. Unless otherwise noted, information on the OPG's post-employment benefit programs is presented on a consolidated basis. OPG does not maintain separate pension and OPEB plans for the employees and pensioners associated with the Prescribed Facilities.

OPG accrues its obligations under pension and OPEB plans in accordance with US GAAP. The obligations for pension and OPRB are determined using the projected benefit method pro-rated on service. The obligation for LTD benefits is determined using the projected benefit method on a terminal basis. Pension and OPEB obligations are impacted by factors including interest rates, adjustments arising from plan amendments, demographic assumptions, experience gains or losses, salary levels, inflation, and health care cost escalation assumptions. Pension and OPEB costs and obligations are determined annually by independent actuaries using management's best estimate assumptions.

Assumptions are significant inputs to actuarial models that measure pension and OPEB obligations and related effects on operations. Discount rate, inflation, and changes in salary levels are three critical assumptions in the determination of benefit costs and obligations. In addition, the expected return on plan assets is a critical assumption in the determination of registered pension plan costs. These assumptions, as well as other assumptions involving demographic factors such as retirement age, mortality, and employee turnover, are evaluated periodically by management in consultation with independent actuaries. During the evaluation process, the assumptions are updated to reflect past experience and expectations for the future. Actual results in any given year will often differ from actuarial assumptions because of economic and other factors. In accordance with US GAAP, for pension and OPRB, the impact of these updates and differences on the respective benefit obligations is accumulated and amortized over future periods; for LTD benefits, the impact of these updates and differences is immediately recognized as OPEB costs in the period incurred.

Discount rates, which are representative of AA corporate bond yields, are used to calculate the present value of the expected future cash flows on the measurement date to determine the projected benefit obligations for OPG's employee benefit plans. A lower discount rate increases the benefit obligations and increases benefit costs. The expected rate of return on plan assets is based on the pension fund's asset allocation, as well as the expected return considering long-term historical risks and returns associated with each asset class within the plan portfolio. A lower expected rate of return on plan assets increases pension cost.

Pension fund assets include equity securities, corporate and government debt securities, pooled funds, real estate, infrastructure, and other investments. These assets are managed by professional investment managers. The pension fund does not invest in equity or debt securities issued by OPG. Pension fund assets are valued using market-related values for purposes of determining the amortization of actuarial gains or losses and the expected return on plan assets. The market-related value recognizes gains and losses on equity assets relative to a six percent assumed real return over a five-year period.

Pension and OPEB costs include current service costs, interest costs on the obligations, the expected return on pension plan assets, adjustments for plan amendments and adjustments for actuarial gains or losses, which result from changes in assumptions and experience gains and losses. Past service costs or credits arising from pension and OPRB plan amendments are amortized on a straight-line basis over the expected average remaining service life to full eligibility of the employees covered by the corresponding plan. Past service costs or credits arising from amendments to LTD benefits are immediately recognized as OPEB costs in the period incurred. Due to the long-term nature of pension and OPRB liabilities, the excess of the net cumulative unamortized gain or loss, over 10 percent of the greater of the benefit obligation and the market-related value of the plan assets (the corridor), is amortized over the expected average remaining service life of the employees, which represents the period during which the associated economic benefits are expected to be realized by OPG. Actuarial gains or losses for LTD benefits are immediately recognized as OPEB costs in the period during which the associated y recognized as OPEB costs in the period during which the associated economic benefits are expected to be realized by OPG. Actuarial gains or losses for LTD benefits are immediately recognized as OPEB costs in the period incurred.

OPG recognizes the funded status of the defined benefit plans on their balance sheets. The funded status is measured as the difference between the fair value of plan assets and the benefit obligation on a plan-by-plan basis.

Actuarial gains or losses and past service costs or credits that arise during the year and are not recognized immediately as components of benefit costs are recognized as increases or decreases in OCI, net of income taxes. The unamortized amounts in AOCI are subsequently reclassified and recognized as components of pension and OPRB costs as described above.

OPG and therefore the Prescribed Facilities record an offsetting regulatory asset or liability for the portion of pension and OPRB-related adjustments to AOCI attributable to the Prescribed Facilities, in order to reflect the expected recovery or refund of these amounts through future regulated prices charged to customers. For the recoverable or refundable portion attributable to the Prescribed Facilities, a corresponding change is recorded in this regulatory asset or liability for the amount of the increases or decreases in OCI and for the amounts reclassified from AOCI into benefit costs during the period.

When the recognition of the transfer of employees and employee-related benefits gives rise to both a curtailment and a settlement, the curtailment is accounted for prior to the settlement. A curtailment is the loss by employees of the right to earn future benefits under the plan. A settlement is the discharge of a plan's liability.

### **Income Taxes and Investment Tax Credits**

OPG is exempt from income tax under the *Income Tax Act* (Canada). However, under the *Electricity Act, 1998*, OPG is required to make payments in lieu of corporate income taxes to the Ontario Electricity Financial Corporation (OEFC). These payments are calculated in accordance with the *Income Tax Act* (Canada) and the *Taxation Act, 2007* (Ontario), as modified by the *Electricity Act, 1998* and related regulations. This results in OPG effectively paying taxes similar to what would be imposed under the federal and Ontario tax acts. OPG's payments in lieu of corporate income taxes are made on an aggregate basis for all of its operations. Income taxes payable/recoverable, deferred income tax assets, deferred income tax liabilities and income tax expense reflected in these financial statements are calculated as though the Prescribed Facilities were a standalone taxable entity.

OPG and therefore the Prescribed Facilities follow the liability method of accounting for income taxes. Under the liability method, deferred income tax assets and liabilities are determined based on differences between the accounting and tax bases of assets and liabilities. Deferred amounts are measured using the enacted tax rates and

laws that will be in effect when the differences are expected to reverse. The effect of a change in tax rates on deferred income tax assets and liabilities is included in income in the period the change is enacted.

If it is determined that it is more likely than not that some, or all, of a deferred income tax asset will not be realized, a valuation allowance is recorded to report the balance at the amount expected to be realized.

OPG and therefore the Prescribed Facilities record regulatory assets or liabilities for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers.

Tax benefits associated with income tax positions taken, or expected to be taken, in a tax return and investment tax credits are recorded only when the more likely than not recognition threshold is satisfied. Tax benefits and investment tax credits recognized are measured at the largest amount of benefit that is greater than 50 percent likely of being realized upon settlement.

Investment tax credits are recorded as a reduction to income tax expense and are primarily attributed to the Prescribed Facilities on the basis of the underlying expenditures giving rise to the credits. Interest and penalties associated with unrecognized tax benefits are classified as income tax expense.

OPG makes payments in lieu of property tax on certain of its generating assets to the OEFC, and also pays property taxes to municipalities. These payments are determined on an individual facility basis, and those pertaining to the Prescribed Facilities are reflected in these financial statements.

OPG pays charges on gross revenue derived from the annual generation of electricity from its hydroelectric generating assets. The gross revenue charge (GRC) includes a fixed percentage charge applied to the annual hydroelectric generation derived from stations located on provincial Crown lands, in addition to graduated rate charges applicable to all hydroelectric stations. The GRC costs and the associated assets and liabilities reflected in these financial statements represent amounts directly attributed to the generation derived from the regulated hydroelectric stations. GRC costs are reported in fuel expense. GRC prepayments or liabilities are included in other accounts receivable and prepaid expenses or accounts payable and accrued charges, respectively.

### **Changes in Accounting Policies and Estimates**

### Useful Lives of Nuclear Long-Lived Assets

The accounting assumptions related to the estimated end-of-life dates for long-lived assets require significant management judgment, including consideration of various technological and other factors. The station end-of-life assumptions also impact the measurement of OPG's ARO and other related accounting assumptions. OPG reviews the useful life assumptions for its generating stations on a regular basis.

In December 2015, OPG revised its accounting assumptions for the estimated useful lives of its nuclear generating stations. Effective December 31, 2015:

- the average service lives of the Bruce A GS and Bruce B GS were extended from 2048 to 2052 and from 2019 to 2061, respectively, to reflect the estimated end-of-life dates reflected in the updated refurbishment agreement between the IESO and Bruce Power L.P. (Bruce Power), which was announced in December 2015;
- the average service life of the Darlington GS was extended by one year to 2052 to reflect the approval of the refurbishment schedule in 2015; and
- the average service life of the Pickering GS was extended by less than one year to reflect the technical confidence that all six operating units of the station will operate to the end of 2020.

To reflect the above changes, OPG recognized a total increase of \$2,330 million in the Nuclear Liabilities, and a corresponding decrease in the related asset retirement costs capitalized to PP&E, effective December 31, 2015. These changes included a decrease in the Nuclear Liabilities of \$417 million relating to the Darlington and Pickering

nuclear generating stations and a corresponding decrease in the related asset retirement costs capitalized to PP&E. The changes associated with the Pickering GS and the Darlington GS were recognized in the Prescribed Facilities' financial statements as at December 31, 2015. The nuclear ARO associated with these regulated nuclear facilities was impacted by the changes to the Bruce station service lives because the costs of OPG's fleet-wide nuclear waste management programs are shared by all of OPG's nuclear stations based on used nuclear fuel and waste volumes.

In December 2015, as required by the OEB's previous decisions and orders, OPG applied to the OEB under case number EB-2015-0374 for an accounting order establishing a new deferral account to record, effective January 1, 2016, the revenue requirement impact on the prescribed nuclear facilities of changes to the Nuclear Liabilities and depreciation expense reflecting the above changes in the nuclear station end-of-life dates. In March 2016, the OEB issued its final decision and order establishing the requested account effective January 1, 2016. The new deferral account is expected to largely offset the total decrease in depreciation expense and accretion expense for the Prescribed Facilities in 2016 arising from the above changes in station end-of-life assumptions and Nuclear Liabilities.

### Impacts of Regulation of the Newly Regulated Hydroelectric Facilities and the OEB's Decisions

As a result of the Newly Regulated Hydroelectric Facilities becoming prescribed for rate regulation effective July 1, 2014 by *Ontario Regulation 53/05* as amended, regulatory assets related to deferred income taxes, and unamortized amounts recorded in AOCI in respect of pension and OPEB obligations were recognized in OPG's and Prescribed Facilities' financial statements. The recognition of the regulatory asset related to deferred income taxes resulted in an extraordinary gain of \$243 million in the statements of income for 2014. The recognition of regulatory assets related to pension and OPEB obligations for the Newly Regulated Hydroelectric Facilities resulted in an increase of \$184 million in OCI, net of \$61 million in income taxes, in 2014.

The OEB's 2014 decision and order also approved a \$1,365 million addition to regulated rate base due to the completion and placement in service of the Niagara Tunnel project in March 2013. The approved rate base amount was lower than the cost of the asset, which resulted in a write-off of costs of \$77 million in 2014. In January 2016, the OEB issued its decision on OPG's December 2014 motion asking the OEB to review and vary parts of its November 2014 decision, including the disallowed Niagara Tunnel expenditures. In its January 2016 decision, the OEB reversed a portion of the original disallowance of the Niagara Tunnel expenditures. As a result, OPG recorded a gain of \$22 million in the first quarter of 2016 to recognize the expected future recovery from customers of the portion of the disallowance reversed by the OEB's motion decision.

### Recent Accounting Pronouncements

### Revenue from Contracts with Customers

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update No. 2014-09, *Revenue from Contracts with Customers* (ASU 2014-09), which supersedes nearly all existing revenue recognition guidance, including industry-specific guidance, under US GAAP. The core principle of ASU 2014-09 is to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration to which an entity expects to be entitled for those goods or services. In July 2015, the FASB approved the deferral of the effective date of the new revenue standard by one year for public entities reporting under US GAAP from 2017 to 2018. As such, the standard is expected to be applicable to OPG's 2018 fiscal year, including interim periods. OPG is assessing the impact of this new standard on its consolidated financial statements and the financial statements of the Prescribed Facilities and has not yet determined the method by which it will adopt the standard in 2018.

### Balance Sheet Classification of Deferred Income Taxes

In November 2015, the FASB issued Accounting Standards Update No. 2015-17, *Income Taxes (Topic 740): Balance Sheet Classification of Deferred Taxes* (ASU 2015-17), which requires entities to present deferred income tax assets and deferred income tax liabilities as non-current in a classified balance sheet. ASU 2015-17 simplifies the existing guidance, which requires entities to separately present deferred income tax assets and deferred income tax liabilities.

as current and non-current in a classified balance sheet. As permitted by the standard, OPG and therefore the Prescribed Facilities early adopted the updates to ASU 2015-17 for the fiscal year ended December 31, 2015 on a retrospective basis. Other than through the change in the balance sheet presentation of deferred income tax assets and deferred income tax liabilities, the amended standard does not impact OPG's or the Prescribed Facilities' financial statements.

### Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share

In May 2015, the FASB issued Accounting Standards Update No. 2015-07, *Fair Value Measurement (Topic 820) – Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share (or its Equivalent)*. Under the new guidance, investments measured at net asset value, as a practical expedient for fair value, are excluded from the fair value hierarchy. Removing investments measured using the practical expedient from the fair value hierarchy is intended to eliminate the diversity in practice that currently exists with respect to the categorization of these investments. The only criterion for categorizing investments in the fair value hierarchy will be the observability of the inputs. The amendments will be effective for OPG's 2016 fiscal year, including interim periods. As the amendments pertain to disclosures, the adoption of the updated standard will not result in adjustments to balances reported in OPG's or the Prescribed Facilities' financial statements.

### Lease Accounting

In February 2016, the FASB issued the accounting update for ASC Topic 840, *Leases*. The update includes comprehensive changes to existing guidance for lease accounting, particularly for lessees. The standard is expected to be effective for OPG's 2019 fiscal year, including interim periods. Early adoption is permitted. OPG is assessing the impact of the new standard on OPG's and the Prescribed Facilities' financial statements.

### 4. PP&E, INTANGIBLE ASSETS AND DEPRECIATION AND AMORTIZATION

Depreciation and amortization expenses for the years ended December 31 consist of the following:

(millions of dollars)	2015	2014
Depreciation	428	419
Amortization of intangible assets		6
Amortization of regulatory assets and liabilities (Note 5)	464	290
Amounts recognized in regulatory variance and deferral accounts	(2)	(65)
	895	650

PP&E as at December 31 consists of the following:

(millions of dollars)	2015	2014
Nuclear generating stations	6,214	6,277
Hydroelectric generating stations	9,351	9,287
Construction in progress	2,388	1,739
	17,953	17,303
Less: accumulated depreciation		
Nuclear generating stations	3,642	3,353
Hydroelectric generating stations	1,938	1,804
	5,580	5,157
	12,373	12,146

Construction in progress as at December 31 consists of the following:

(millions of dollars)	2015	2014
Darlington Refurbishment Other	1,868 520	1,309 430
	2,388	1,739

Interest capitalized to construction and development in progress at an average rate of five percent during 2015 (2014 – five percent) was \$98 million (2014 – \$60 million).

Intangible assets as at December 31 consist of the following:

(millions of dollars)	2015	2014
	440	110
Nuclear generating stations	118	116
Hydroelectric generating stations	4	4
Development in progress	4	3
	126	123
Less: accumulated amortization		
	110	105
Nuclear generating stations	110	105
Hydroelectric generating stations	3	3
	113	108
	13	15

The estimated aggregate amortization expense for each of the five succeeding years for the in-service intangible assets recognized as at December 31, 2015 is as follows:

(millions of dollars)	2016	2017	2018	2019	2020
Amortization expense	5	2	1	-	-

The net assets contributed by the Newly Regulated Hydroelectric Facilities as at January 1, 2014 included \$2,525 million in net PP&E and \$57 million in construction in progress, which were wholly reflected as increases in the Prescribed Facilities' net capital as at January 1, 2014.

### 5. REGULATORY ASSETS AND LIABILITIES

In December 2014, under case number EB-2014-0370, OPG filed an application with the OEB to recover approximately \$1.8 billion in December 31, 2014 balances in most of the authorized regulatory variance and deferral accounts. A partial settlement agreement between OPG and intervenors providing for the recovery of approximately \$1.5 billion of the total amount sought by OPG was approved by the OEB in June 2015 (the Partial Settlement Agreement). On September 10, 2015, the OEB issued its decision approving for recovery, without adjustments, the remaining balances totalling \$263 million requested in OPG's application, which were not covered by the Partial Settlement.

The above approvals included recovery of \$714 million in the Pension and OPEB Cost Variance Account, recorded during 2013 and 2014, over six years starting on July 1, 2015, and \$225 million recorded in this variance account prior to 2013 that will continue to be recovered until December 31, 2024 as previously authorized by the OEB. The remaining approved balances of \$809 million included the \$154 million portion of the Bruce Lease Net Revenues Variance Account related to the impact of the derivative liability embedded in the Bruce Lease as of December 31, 2014, which would continue to be recovered on the basis of OPG's expected payments to Bruce Power and associated income tax impacts, and other account balances, the majority of which were approved for recovery over a period of 18 months from July 1, 2015 to December 31, 2016.

On October 8, 2015, the OEB issued an order implementing its June 2015 and September 2015 decisions on OPG's application. The order authorized OPG to recover \$933 million over the period from October 1, 2015 to December 31, 2016 through new rate riders for generation from all of OPG's regulated nuclear and regulated hydroelectric facilities during this period, as disclosed in Note 3. The remaining approved balances will be subject to recovery after 2016. The OEB's October 2015 order also approved the continuation of previously authorized variance and deferral accounts, including those authorized pursuant to *Ontario Regulation 53/05*.

The new rate riders pursuant to the OEB's October 2015 order are in addition to those authorized by the OEB in its December 2014 order for production from OPG's nuclear and hydroelectric generating stations prescribed for rate regulation prior to 2014, for the period from January 1, 2015 to December 31, 2015, as disclosed in Note 3. Those rate riders provided for the net recovery of the balances in certain variance accounts as at December 31, 2013, totaling \$189 million, over the 12-month period in 2015. These balances were approved by the OEB, without adjustments.

Any shortfall or over-recovery of the approved balances due to differences between actual and forecast production is recorded in the authorized Nuclear Deferral and Variance Over/Under Recovery Variance Account and the Hydroelectric Deferral and Variance Over/Under Recovery Variance Account to be collected from, or refunded to, customers in the future.

In 2015, OPG recorded amortization of the regulatory assets and liabilities for the deferral and variance account balances approved for disposition on a straight-line basis, based on recovery or repayment periods authorized by the OEB's December 2014 and October 2015 orders. In 2014, OPG recorded such amortization on a straight-line basis based on balances and recovery or repayment periods authorized by the OEB's approval, in 2013, of a settlement agreement between OPG and intervenors on OPG's application to dispose of the December 31, 2012 balances in most of the deferral and variance accounts under case number EB-2012-0002.

During the period from November 1, 2014 to December 31, 2015, OPG recorded additions to the variance and deferral accounts as authorized by the OEB's December 2014 and October 2015 orders, relative to the forecast amounts reflected in the cost of service regulated prices in effect during this period, where applicable. During the period from January 1, 2014 to October 31, 2014, additions to the variance and deferral accounts were recorded as authorized by the OEB's 2013 decision and order.

Where authorized by the OEB, OPG recorded interest on the unamortized balances in the applicable variance and deferral accounts at the OEB-prescribed rates of 1.47 percent per annum for the period from January 1, 2015 to March 31, 2015 and 1.10 percent per annum for the period from April 1, 2015 to December 31, 2015. As part of the Partial Settlement Agreement, OPG ceased recording interest on the derivative portion of the Bruce Lease Net Revenues Variance Account balance for the period from January 1, 2015 to December 31, 2016.

The regulatory assets and liabilities recorded as at December 31 are as follows:

(millions of dollars)	2015	2014
Regulatory assets		
Variance and deferral accounts authorized by the OEB		
Pension and OPEB Cost Variance Account	865	939
Pension & OPEB Cash Versus Accrual Differential Deferral Account (Note 10)	315	36
Nuclear Liability Deferral Account	190	286
Hydroelectric Surplus Baseload Generation Variance Account	114	67
Bruce Lease Net Revenues Variance Account	95	315
Nuclear Deferral and Variance Over/Under Recovery Variance Account	82	56
Other variance and deferral accounts	53	268
	1,714	1,967
Pension and OPEB Regulatory Asset (Note 10)	3,362	4,363
Deferred Income Taxes (Note 9)	403	344
	5 470	6.674
Total regulatory assets	5,479 628	6,674 167
Less: current portion	020	107
Non-current regulatory assets	4,851	6,507
Degulatory liabilities		
Regulatory liabilities		
Variance and deferral accounts authorized by the OEB Other variance and deferral accounts	60	4.4
	00	44
Total regulatory liabilities	60	44
Less: current portion	26	5
Non-current regulatory liabilities	34	39

The changes in the regulatory assets and liabilities during 2015 and 2014 are as follows:

(millions of dollars)	Pension and OPEB Cost Variance	Pension & OPEB Cash vs Accrual Differential Deferral	Nuclear Liability Deferral	Hydro- electric Surplus Baseload Generation Variance	Bruce Lease Net Revenues Variance	Nuclear Deferral & Variance Over/Under Recovery Variance	Other Variance and Deferral (net)	Pension and OPEB Regula- tory Asset	Deferred Income Taxes
Net regulatory assets (liabilities) January 1, 2014	667	-	254	19	353	43	323	3,158	(6)
Increase	312	36	82	48	4	15	51	1,205	350
Interest	-	-	-	-	-	1	5	-	-
Amortization	(40)	-	(50)	-	(42)	(3)	(155)	-	-
Net regulatory assets December 31, 2014	939	36	286	67	315	56	224	4,363	344
Increase (decrease)	-	279	-	82	(149)	44	(65)	(1,001)	59
Interest	-	-	-	-	-	1	3	-	-
Amortization	(74)	-	(96)	(35)	(71)	(19)	(169)	-	-
Net regulatory assets (liabilities) December 31, 2015	865	315	190	114	95	82	(7)	3,362	403

# Pension and OPEB Cost Variance Account

As authorized by the OEB, for the period from March 1, 2011 to October 30, 2014, the Pension and OPEB Cost Variance Account recorded the differences between OPG's actual pension and OPEB costs for the Previously Regulated Facilities determined on an accrual basis and related tax impacts, and corresponding forecast amounts reflected in the regulated prices then in effect. In its November 2014 decision, the OEB determined that the pension and OPEB amounts reflected in OPG's new regulated prices effective November 1, 2014 would be limited to the Company's estimated minimum contributions to its registered pension plan attributed to the Prescribed Facilities and a forecast of OPG's expenditures on the OPEB and supplementary pension plans attributed to the Prescribed Facilities. As such, the OEB ordered the Pension and OPEB Cost Variance Account to record only amortization beginning on November 1, 2014.

In its October 2015 order, the OEB approved the continuation of the previously authorized recovery of 10/12 of the account balance as at December 31, 2012 over a 144-month period to December 31, 2024. Amounts recorded in the account in 2013 and 2014 were approved for recovery over a 72-month period to June 30, 2021 by the OEB's October 2015 order.

## Pension & OPEB Cash Versus Accrual Differential Deferral Account

In its November 2014 decision and December 2014 order, the OEB established the Pension & OPEB Cash Versus Accrual Differential Deferral Account. Effective November 1, 2014, this deferral account records the difference between OPG's actual pension and OPEB costs attributed to the Prescribed Facilities determined on an accrual basis under US GAAP and OPG's corresponding actual cash expenditures for these plans. The balance in the account as at December 31, 2015 represents the excess of costs calculated using the accrual basis over the cash basis for the period from November 1, 2014 to December 31, 2015. The Company has recognized the amount set aside in the deferral account as a regulatory asset in its consolidated financial statements and the financial statements of the Prescribed Facilities. The OEB's November 2014 decision indicated that the future recovery, if any, of amounts recorded in the deferral account would be subject to the outcome of the generic OEB proceeding on the regulatory

treatment and recovery of pension and OPEB costs. The OEB's consultation process to develop standard principles to guide its review of pension and OPEB costs of rate regulated utilities in the electricity and natural gas sectors, including establishing appropriate regulatory mechanisms for cost recovery, began in May 2015 and is ongoing. OPG is participating in the consultation.

# **Nuclear Liability Deferral Account**

In accordance with *Ontario Regulation 53/05*, the OEB has authorized the Nuclear Liability Deferral Account (NLDA) in connection with changes to OPG's liabilities for nuclear used fuel management and nuclear decommissioning and L&ILW management associated with the nuclear facilities owned and operated by OPG, which are comprised of the Pickering and Darlington nuclear generating stations. The deferral account records the revenue requirement impact associated with the changes in these liabilities arising from an approved reference plan, in accordance with the terms of the ONFA. During 2012, the Province approved the 2012 ONFA Reference Plan covering the period from 2012 to 2016, with an effective date of January 1, 2012. As the regulated prices in effect prior to November 1, 2014 did not reflect the impact of the 2012 ONFA Reference Plan, OPG recorded an increase to the regulatory asset for the NLDA during the period from January 1, 2012 to October 31, 2014. Components of the change in the regulatory asset for the NLDA for the year ended December 31, 2014 are summarized below. There were no additions to the account in 2015.

(millions of dollars)	2014
Fuel expense	23
Low and intermediate level waste management variable expenses <sup>1</sup>	1
Depreciation expense	43
Income taxes	15
	82

<sup>1</sup> Amount was recorded as a reduction to OM&A expenses.

In its October 2015 order, the OEB approved the recovery of the account balance as at December 31, 2014 over an 18-month period from July 1, 2015 to December 31, 2016.

## Hydroelectric Surplus Baseload Generation Variance Account

The Hydroelectric Surplus Baseload Generation Variance Account records the impact of foregone production at OPG's regulated hydroelectric facilities due to surplus baseload generation conditions. The variance account was authorized by the OEB effective March 1, 2011 for the regulated hydroelectric facilities prescribed for rate regulation prior to 2014, and effective November 1, 2014, for the applicable Newly Regulated Hydroelectric Facilities.

In its November 2014 decision and December 2014 order, the OEB approved the recovery of the account balance as at December 31, 2013 over a 12-month period beginning on January 1, 2015. The OEB's October 2015 order provided for the recovery of amounts recorded in the account during 2014 over an 18-month period from July 1, 2015 to December 31, 2016.

## **Bruce Lease Net Revenues Variance Account**

In accordance with *Ontario Regulation 53/05*, the OEB is required to include the difference between OPG's revenues and costs associated with its ownership of the two nuclear stations on lease to Bruce Power in the determination of the regulated prices for production from OPG's regulated nuclear facilities. The OEB established a variance account that captures differences between OPG's revenues and costs related to the Bruce nuclear generating stations and the corresponding forecasts included in approved nuclear regulated prices.

Variances between OPG's revenues and costs related to the Bruce nuclear generating stations and the corresponding forecasts included in the nuclear regulated prices are recognized by the Prescribed Facilities as increases or decrease to the regulatory asset for the Bruce Lease Net Revenues Variance Account. The changes in

the regulatory asset are not recognized in the statements of income of the Prescribed Facilities and are charged to OPG through the due to/from account with OPG. OPG reports the impact of these variances in its consolidated statements of income as part of the revenues and expenses to which they relate.

Prior to December 4, 2015, OPG's revenues associated with the nuclear stations on lease to Bruce Power included changes in the fair value of the derivative embedded in the Bruce Power lease agreement (Bruce Lease), which was recognized as a liability in OPG's consolidated financial statements. The derivative arose from the conditional reduction of lease revenue to OPG in the future, embedded in the terms of the agreement, in each calendar year where the annual arithmetic average of the Hourly Ontario Electricity Price fell below \$30/MWh and certain other conditions were met. Effective December 4, 2015, the Bruce Lease was amended to remove the provision that provided for these conditional reductions to OPG's revenue under the lease. Following the amendments to the Bruce Lease, OPG reversed the embedded derivative liability of \$299 million in December 2015, with an offsetting reduction in the regulatory asset for the Bruce Lease Net Revenues Variance Account.

In 2013, the OEB ordered the portion of the balance in the Bruce Lease Net Revenues Variance Account related to the impact of the derivative liability embedded in the terms of the Bruce Lease to be recovered on the basis of OPG's expected rent rebate payments to Bruce Power and associated income tax impacts. The OEB's October 2015 order reaffirmed this approach. Amounts collected from customers for the derivative liability for periods after its reversal in December 2015 are subject to refund in the future and recognized as a regulatory liability as part of the variance account balance.

In its October 2015 order, the OEB approved the continuation of the previously authorized recovery of the nonderivative portion of the account balance as at December 31, 2012 over a 48-month period ending December 31, 2016. The non-derivative portion of amounts recorded in the account in 2013 and 2014 was approved for recovery over an 18-month period from July 1, 2015 to December 31, 2016 by the OEB's October 2015 order.

#### **Other Variance and Deferral Accounts**

## Regulatory assets

As at December 31, 2015 and 2014, regulatory assets for other variance and deferral accounts included amounts for the Capacity Refurbishment Variance Account, the Pension & OPEB Cash Payment Variance Account, the Hydroelectric Deferral and Variance Over/Under Recovery Variance Account, the Pickering Life Extension Depreciation Variance Account, and the Nuclear Development Variance Account.

Pursuant to *Ontario Regulation 53/05*, the Capacity Refurbishment Variance Account captures variances from forecasts reflected in the regulated prices for capital and non-capital costs incurred to increase the output of, refurbish, or add operating capacity to the Prescribed Facilities. This includes variances related to the refurbishment of the Darlington nuclear generating station, life extension initiatives at the Pickering nuclear generating station, and other projects.

The Pension & OPEB Cash Payment Variance Account records, effective November 1, 2014, the difference between OPG's actual contributions to its registered pension plan and expenditures on its OPEB and supplementary pension plans attributed to the Prescribed Facilities, and the corresponding forecast amounts reflected in the regulated prices.

The Pickering Life Extension Depreciation Variance Account balance was recorded wholly during the period from November 1, 2014 to December 31, 2014. The account balance represents an offset to the customer credit for the reduction in depreciation expense for the Pickering nuclear generating station that was reflected both as a reduction to the base regulated prices effective November 1, 2014 and the nuclear rate rider in effect during 2014.

The Nuclear Development Variance Account records variances between the actual non-capital costs incurred and firm financial commitments made by OPG in the course of planning and preparation for the development of proposed

new nuclear generation facilities and the corresponding forecasts reflected in the regulated prices approved by the OEB.

## Regulatory liabilities

As at December 31, 2015 and 2014, regulatory liabilities for other variance and deferral accounts included amounts for the Hydroelectric Water Conditions Variance Account, the Ancillary Services Net Revenue Variance Account, the Income and Other Taxes Variance Account, and the Hydroelectric Incentive Mechanism Variance Account.

The Hydroelectric Water Conditions Variance Account captures the impact of differences in regulated hydroelectric electricity production due to differences between forecast water conditions underlying the production forecast approved by the OEB in setting regulated hydroelectric prices, and the actual water conditions.

The Ancillary Services Net Revenue Variance Account was authorized by the OEB to capture differences between actual nuclear and regulated hydroelectric ancillary services net revenue and the forecast amounts of such revenue approved by the OEB in setting regulated prices.

The Income and Other Taxes Variance Account includes deviations in income taxes for the regulated business, from those approved by the OEB in setting regulated prices, caused by changes in tax rates and rules, as well as reassessments.

The Hydroelectric Incentive Mechanism Variance Account records a credit to customers equal to 50 percent of OPG's hydroelectric incentive mechanism revenues above a specified threshold for the regulated hydroelectric facilities.

In its November 2014 decision and December 2014 order, the OEB approved the recovery or repayment of certain of the account balances of the other variance and deferral accounts as at December 31, 2013 over a 12-month period beginning on January 1, 2015. In its October 2015 order, the OEB approved the recovery or repayment of the majority of the account balances of the other variance and deferral accounts as at December 31, 2014, less amounts approved in the December 2014 order, over an 18-month period from July 1, 2015 to December 31, 2016.

# Pension and OPEB Regulatory Asset

The Pension and OPEB Regulatory Asset represents unamortized amounts in respect of OPG's pension and OPEB plans that have been recognized in OCI and not yet reclassified into the amortization component of the benefit costs in respect of these plans and are expected to be recovered from customers through future regulated prices for the Prescribed Facilities. The regulatory asset is reversed as underlying unamortized balances are amortized into components of benefit costs. Refer to Note 3 for a detailed discussion of pension and OPEB cost recovery methodology under the heading *Rate Regulated Accounting*. The AOCI amounts related to pension and OPEB plans are presented in Note 10.

## **Deferred Income Taxes**

OPG and therefore the Prescribed Facilities are required to recognize deferred income taxes, including deferred income taxes on temporary differences related to the regulatory assets and liabilities recognized for accounting purposes. In addition, OPG and therefore the Prescribed Facilities are required to recognize a separate regulatory asset or liability for the amount of deferred income taxes expected to be included in future regulated prices and recovered from, or paid to, customers. Income taxes are discussed in Note 9.

# 6. LONG-TERM DEBT AND NET INTEREST EXPENSE

The Prescribed Facilities' long-term debt is due to OPG and is derived based on the methodology approved in the OEB Decisions. This debt is reflected as long-term debt in these financial statements because the methodology approved in the OEB Decisions takes into account OPG's long-term debt. The methodology establishes the total

amount of debt based on a deemed capital structure for the Prescribed Facilities, which was set by the OEB at 55 percent debt and 45 percent equity effective November 1, 2014 following the inclusion of the Newly Regulated Hydroelectric Facilities. Prior to November 1, 2014, the OEB-approved deemed capital structure, which included only the Previously Regulated Facilities, was 53 percent debt and 47 percent equity.

The long-term debt portion of the total debt established using the deemed capital structure includes project-specific long-term debt incurred by OPG to finance the PP&E and intangible assets of the Prescribed Facilities and an allocation of OPG's non-project-specific long-term debt. The allocation of the non-project-specific long-term debt is primarily based on the net PP&E balances, excluding those financed by project-specific debt, of the Prescribed Facilities relative to those of OPG. The Prescribed Facilities' asset balances used in this calculation include the Newly Regulated Hydroelectric Facilities beginning in 2014. The Other component of the Prescribed Facilities' long-term debt is derived as the difference between total debt per the deemed capital structure and the sum of the Prescribed Facilities' short-term debt and the portion of OPG's actual long-term debt attributed to the Prescribed Facilities.

The following table summarizes the components of the long-term debt of the Prescribed Facilities as at December 31:

(millions of dollars)	2015	2014
OPG's project-specific debt for the Prescribed Facilities	1.065	1,065
Allocated portion of OPG's non-project-specific debt	1.376	2.117
Other	3,005	2,053
Total long-term debt	5,446	5,235

The net assets contributed by the Newly Regulated Hydroelectric Facilities as at January 1, 2014 included \$1,339 million in long-term debt derived using the methodology described above and wholly reflected as a decrease in the Prescribed Facilities' net capital as at January 1, 2014. This included an allocation of \$621 million of the total non-project-specific debt reflected in OPG's consolidated financial statements as at December 31, 2013.

OPG's project-specific long-term debt included in the derivation of the Prescribed Facilities' long-term debt as at December 31, 2015 consists of outstanding debt financing of \$1,065 million for the Niagara Tunnel project provided by the OEFC (December 31, 2014 – \$1,065 million). This debt was issued by OPG against a Niagara Tunnel project credit facility with the OEFC, which expired on December 31, 2014. Interest payable by OPG was fixed for each note issued against the facility at the time of advance at a rate equal to the prevailing Benchmark Government of Canada 10-Year Bond, plus a credit spread determined by the OEFC based on a survey of market rates.

As at December 31, 2015, OPG's total non-project-specific long-term debt consisted of senior and subordinated notes payable to the OEFC totaling \$1,960 million (2014 – \$2,460 million). Approximately 70 percent of this amount was allocated to the Prescribed Facilities as at December 31, 2015 (2014 – 86 percent) based on the methodology per the OEB Decisions.

OPG maintained a \$500 million general corporate credit facility with the OEFC, which expired on December 31, 2014 with no amounts outstanding. In December 2014, OPG entered into an agreement with the OEFC for an \$800 million general corporate credit facility which expires on December 31, 2016, in support of financing requirements for the 2015–2016 period. As at December 31, 2015 and 2014, there were no amounts outstanding under this facility.

The net interest expense on the Prescribed Facilities' long-term debt for the years ended December 31, 2015 and 2014 at effective rates of 5.18 and 5.01 percent per annum, respectively, was calculated pursuant to the methodology approved by the OEB Decisions. The calculation of the effective rates reflects the actual interest cost of the weighted average amount of applicable OPG debt issues outstanding during the year that are attributed to the Prescribed Facilities, taking into account the impact of related effective interest rate hedging instruments entered into by OPG.

The following table summarizes the net interest expense on the Prescribed Facilities' long-term debt for the years ended December 31:

(millions of dollars)	2015	2014
OPG's project-specific debt for the Prescribed Facilities	60	60
Allocated portion of OPG's non-project-specific debt	74	100
Other	143	100
Amounts recorded in regulatory variance and deferral accounts	(1)	(61)
Net interest expense on long-term debt	276	199

# 7. SHORT-TERM DEBT AND NET INTEREST EXPENSE

The Prescribed Facilities' short-term debt is due to OPG and is derived based on the methodology approved in the OEB Decisions that considers the following:

- a portion of OPG's short-term borrowings, if any, excluding project-specific short-term debt directly assigned on the basis of the assets it is incurred to finance; and
- a portion of securitized borrowings, if any, allocated to the Prescribed Facilities on the basis of construction and development in progress, fuel inventory, and materials and supplies balances attributed to the Prescribed Facilities relative to those of OPG.

Based on this methodology, none of OPG's short-term borrowings were included in the derivation of the Prescribed Facilities' short-term debt as at December 31, 2015 and 2014.

OPG has an agreement to sell an undivided co-ownership interest in its current and future accounts receivable to an independent trust. The maximum amount of co-ownership interest that can be sold under this agreement was reduced to \$150 million and the expiry date was extended from November 30, 2014 to November 30, 2016. As at December 31, 2015 and 2014, with the exception of \$150 million in Letters of Credit in 2015 (2014 – \$150 million), there were no amounts outstanding under this agreement and, therefore, none were reflected in the Prescribed Facilities' short-term debt.

OPG maintains a \$1 billion revolving committed bank credit facility, which is divided into two \$500 million multi-year term tranches. In the second quarter of 2016, OPG renewed and extended both tranches of the credit facility to May 2021. As at December 31, 2015 and 2014, there were no outstanding borrowings under this facility.

The net interest expense on the Prescribed Facilities' short-term debt for the year ended December 31, 2015 was calculated pursuant to the methodology established by the OEB Decisions at an effective rate of 1.01 percent per annum (2014 – 1.20 percent) plus the portion of the cost of maintaining OPG's commercial bank credit facility attributed to the Prescribed Facilities. The calculation of the effective rate is based on the cost of funds associated with OPG's securitized receivables during the year, excluding Letters of Credit, if any, and the interest cost of the weighted average amount of OPG's commercial paper outstanding during the year, as allocated to the Prescribed Facilities.

The following table summarizes the net interest expense on the Prescribed Facilities' short-term debt for the years ended December 31:

(millions of dollars)	2015	2014
Bank credit facility cost	3	4
Net interest expense on short-term debt	3	4

#### 8. NUCLEAR FIXED ASSET REMOVAL AND NUCLEAR WASTE MANAGEMENT LIABILITIES AND FUNDS

The portion of OPG's liabilities for nuclear fixed asset removal and nuclear waste management on a present value basis attributed to the Prescribed Facilities consists of the following as at December 31:

(millions of dollars)	2015	2014
Liability for nuclear used fuel management Liability for nuclear decommissioning and L&ILW management	4,919 3,926	5,317 3,526
Nuclear fixed asset removal and nuclear waste management liabilities	8,845	8,843

The changes in the portion of OPG's Nuclear Liabilities attributed to the Prescribed Facilities for the years ended December 31 are as follows:

(millions of dollars)	2015	2014
Liabilities, beginning of year	8,843	8,430
Increase in liabilities due to accretion <sup>1</sup>	487	465
Decrease in liabilities reflecting changes to the estimated useful lives of the Pickering and Darlington nuclear generating stations ( <i>Note 3</i> )	(417)	-
Increase in liabilities due to nuclear used fuel and waste management variable expenses and other expenses <sup>1</sup>	58	57
Liabilities settled by expenditures on nuclear fixed asset removal and nuclear waste management	(126)	(109)
Liabilities, end of year	8,845	8,843

<sup>1</sup> Excludes the impact of regulatory variance and deferral accounts.

OPG's Nuclear Liabilities are comprised of expected costs to be incurred up to and beyond termination of operations and the closure of its nuclear plant facilities. Costs will be incurred for activities such as preparation for safe storage, dismantling, demolition and disposal of facilities and equipment, remediation and restoration of sites, and the ongoing and long-term management of nuclear used fuel and L&ILW material.

The determination of the accrual for nuclear fixed asset removal and nuclear waste management costs requires significant assumptions since these programs are long-term in nature. The most recent comprehensive update of the cost estimates for the nuclear decommissioning and nuclear waste management liabilities is contained in the approved 2012 ONFA Reference Plan. The next ONFA Reference Plan is expected to be completed in 2016 and will cover the 2017–2021 period.

As discussed in Note 3, effective December 31, 2015, the Prescribed Facilities' statements recognized a decrease in the Nuclear Liabilities of \$417 million and a corresponding decrease in the asset retirement costs capitalized to PP&E to reflect changes in the estimated useful lives of OPG's nuclear stations. The total change in the Nuclear Liabilities recorded by OPG on December 31, 2015 on account of changes in the estimated useful lives of the nuclear stations was determined by discounting the net incremental cash flows at 3.21 per cent.

For the purposes of calculating OPG's Nuclear Liabilities as at December 31, 2015 and therefore the portion of these liabilities attributed to the Prescribed Facilities, consistent with the accounting end-of-life assumptions, nuclear station decommissioning was projected to occur over approximately the next 50 years. The estimates for the Nuclear Liabilities as at December 31, 2015 include cash flow estimates for decommissioning the nuclear stations for approximately 40 years after stations are shut down and to 2078 for placement of used fuel into the long-term disposal repository followed by extended monitoring.

The significant assumptions underlying operational, technical, and economic factors used in the calculation of the accrued Nuclear Liabilities are subject to periodic review. Changes to these assumptions, including changes to

assumptions on the timing of the nuclear waste programs, including construction of waste disposal facilities, station end-of-life dates, waste disposal methods, financial indicators, or the technology employed, may result in significant changes to the value of the accrued liabilities. With programs of this duration and the evolving technology to handle the nuclear waste, there is a significant degree of uncertainty surrounding the measurement of the costs for these long-term programs. These costs may increase or decrease over time.

The costs that are recognized as a liability by OPG and the method of attributing these costs for the purposes of determining the liabilities of the Prescribed Facilities are as follows:

- The present value of the costs of decommissioning the nuclear generating facilities after the end of their useful lives, with the costs determined primarily on an individual facility basis and directly assigned to the nuclear stations of the Prescribed Facilities;
- The present value of the fixed cost portion of nuclear waste management programs that are required based on the total volume of waste expected to be generated over the assumed life of the stations, with the costs attributed to the Prescribed Facilities either on the basis of direct assignment or total expected waste volumes over the assumed lives of all of OPG's nuclear stations, depending on the nature of the waste management program; and
- The present value of the variable cost portion of nuclear waste management programs taking into account waste volumes generated to-date by each of OPG's nuclear generating stations, with the underlying variable cost rates calculated using either the total waste volumes expected to be generated over the assumed life of each of the nuclear generating stations of the Prescribed Facilities or the total waste volumes expected to be generated over the assumed lives of all of OPG's nuclear stations, depending on the nature of the program.

Changes in the portion of OPG's Nuclear Liabilities attributed to the Prescribed Facilities during the years ended December 31, 2015 and 2014 were determined as follows:

- Accretion was computed directly on the balance of the liabilities attributed to the Prescribed Facilities using the discount rates applicable to OPG's total liabilities;
- Nuclear used fuel and nuclear waste management variable expenses were computed using applicable waste management program cost rates applied to waste volumes generated by each of the nuclear stations of the Prescribed Facilities; and
- With the exception of expenditures incurred in relation to the safe storage of Pickering Units 2 and 3 and the
  preparation for future safe storage of the remaining Pickering units, which were directly assigned to the
  Prescribed Facilities, expenditures on nuclear fixed asset removal and nuclear waste management were
  primarily allocated to the Prescribed Facilities in proportions reflecting expected waste volumes for each of the
  nuclear stations over their assumed lives.

# Liability for Nuclear Used Fuel Management Costs

The liability for nuclear used fuel management represents the cost of managing the highly radioactive used nuclear fuel bundles. The federal NFWA, proclaimed into force in 2002, required that Canada's nuclear fuel waste owners form a nuclear waste management organization, and that each waste owner establish a trust fund for used fuel management costs. This organization, the NWMO, is responsible for the design and implementation of Canada's plan for the long-term management of nuclear used fuel waste. To estimate its liability for nuclear used fuel management costs as at December 31, 2015, OPG has adopted a conservative approach consistent with the Adaptive Phased Management concept approved by the Government of Canada, which assumes a DGR as part of the long-term management of nuclear used fuel, with an in-service date of 2035 at the earliest.

## Liability for Nuclear Decommissioning and L&ILW Management Costs

The liability for nuclear decommissioning and L&ILW management represents the estimated costs of decommissioning the nuclear generating stations after the end of their service lives, as well as the cost of managing

L&ILW generated by the stations. The significant assumptions used in estimating future nuclear fixed asset removal costs include a deferred dismantlement basis for decommissioning of the stations, whereby the reactors will remain in a safe state condition for a 30-year period prior to an approximate 10-year dismantlement period.

The life cycle costs of L&ILW management include the costs of processing and storage of such radioactive wastes during and following the operation of the nuclear stations, as well as the costs of the ultimate long-term management of these wastes. The current assumptions used to establish the accrued costs for the management of L&ILW include an L&ILW DGR. Agreement was previously reached with local municipalities for OPG to develop a DGR for the long-term management of L&ILW adjacent to OPG's Western Waste Management Facility. OPG has suspended design activities for the proposed L&ILW DGR pending receipt of the site preparation and construction licence.

#### **Ontario Nuclear Funds Agreement**

In accordance with the ONFA, OPG sets aside and invests funds that are held in segregated custodian and trustee accounts specifically for discharging its obligation for nuclear decommissioning and long-term nuclear waste management. The Decommissioning Fund was established to fund the future costs of nuclear fixed asset removal, long-term L&ILW management, and certain costs for used fuel storage incurred after the stations are shutdown. The Used Fuel Fund was established to fund future costs of long-term nuclear used fuel waste management. OPG makes contributions to the Nuclear Funds based on the approved ONFA Reference Plan in effect.

The balances and earnings of OPG's Decommissioning Fund and Used Fuel Fund were attributed to the Prescribed Facilities primarily using direct assignment on the basis of the station-level opening balances of, and specified station-level contributions to the respective funds prescribed by the approved ONFA Reference Plan in effect. Disbursements from the funds were allocated on the basis of the cost estimates underlying the approved ONFA Reference Plan in effect.

OPG makes quarterly payments to the Used Fuel Fund over the life of its nuclear generating stations, as specified in the ONFA, including contributions to the NFWA Trust (the Trust). The Trust forms part of the Used Fuel Fund, and contributions to the Trust, as required by the NFWA, may be applied towards OPG's ONFA payment obligations. Total required funding for 2015 under the ONFA was \$143 million (2014 – \$139 million). The portion of the total required funding for the years ended December 31, 2015 and 2014 related to the nuclear stations of the Prescribed Facilities, as determined in accordance with the ONFA, was \$173 million and \$170 million, respectively. Based on the approved 2012 ONFA Reference Plan, OPG is required to contribute annual amounts to the Used Fuel Fund ranging from \$150 million to \$288 million over the years 2016 to 2019, of which \$156 million to \$266 million is assigned to the nuclear stations of the Prescribed Facilities. Contributions are not currently required to the Decommissioning Fund based on the approved 2012 ONFA Reference Plan. Since OPG is responsible for the risks associated with liability cost increases and investment returns in the Decommissioning Fund, future contributions to the Decommissioning Fund may be required should the fund be in an underfunded position at the time of the next ONFA Reference Plan review. The required future ONFA contributions are disclosed in Note 13.

The *Nuclear Safety and Control Act* (Canada) requires OPG to have sufficient funds available to discharge the current nuclear decommissioning and waste management liabilities. As required by the terms of the ONFA, the Province has provided a Provincial Guarantee to the Canadian Nuclear Safety Commission (CNSC) since 2003, on behalf of OPG. The Provincial Guarantee provides for any shortfall between the CNSC consolidated financial guarantee requirement and the value of the Nuclear Funds. OPG pays the Province an annual guarantee fee of 0.5 percent of the amount of the Provincial Guarantee. The current value of the Provincial Guarantee amount of \$1,551 million is in effect through to the end of 2017. Based on this guarantee amount, OPG paid a guarantee fee of \$8 million to the Province for each of 2014 and 2015. The full amount of the guarantee fee is reflected in these financial statements.

The investments in the Nuclear Funds include a diversified portfolio of equities and fixed income securities that are invested across geographic markets, as well as investments in infrastructure, real estate, and agriculture. The

Nuclear Funds are invested to fund long-term liability requirements and, as such, the portfolio asset mix is structured to achieve the required return over a long-term horizon. While short-term fluctuations in market value will occur, managing the long-term return of the Nuclear Funds remains the primary goal. OPG jointly oversees the investment management of the Nuclear Funds with the Province.

# Decommissioning Fund

OPG bears the risk and liability for cost estimate changes and fund earnings in the Decommissioning Fund. As at December 31, 2015 and 2014, the Decommissioning Fund was in an overfunded position.

Upon termination of the ONFA, the Province has a right to any excess funds in the Decommissioning Fund, which is the excess of the fair market value of the Decommissioning Fund assets over the estimated completion costs, as per the most recently approved ONFA Reference Plan. When the Decommissioning Fund is overfunded, OPG, and therefore the Prescribed Facilities, limit the earnings recognized in the financial statements by recording a payable to the Province, such that the balance of the Decommissioning Fund is equal the cost estimate of the liability based on the most recently approved ONFA Reference Plan plus the portion of the surplus, if any, that OPG may direct to be treated as a contribution to the Used Fuel Fund. The payable to the Province may be reduced in subsequent periods in the event that the Decommissioning Fund earns less than its target rate of return or in the event that a new ONFA Reference Plan is approved with a higher estimated decommissioning liability. When the Decommissioning Fund is underfunded, the earnings on the Decommissioning Fund reflect actual fund returns based on the market value of the assets.

The Province's right to any excess funding in the Decommissioning Fund upon termination of the ONFA results in OPG, and therefore the Prescribed Facilities, capping annual fund earnings at 3.25 percent plus the long-term Ontario Consumer Price Index (CPI) specified in the most recently approved ONFA Reference Plan, which is the rate of growth in the liability for the estimated completion cost, as long as the Decommissioning Fund is in an overfunded status of less than 120 percent. Under the ONFA, if there is a surplus in the Decommissioning Fund such that the liabilities, as defined by the most recently approved ONFA Reference Plan, are at least 120 percent funded, OPG may direct up to 50 percent of the surplus over 120 percent to be treated as a contribution to the Used Fuel Fund, with the OEFC entitled to a distribution of an equal amount. Therefore, when the Decommissioning Fund is at least 120 percent than 120 percent funded, OPG and therefore the Prescribed Facilities recognize 50 percent of the excess greater than 120 percent in income.

# Used Fuel Fund

OPG is responsible for the risk and liability of cost increases for used fuel waste management, subject to specified graduated liability thresholds, which limit OPG's total financial exposure at approximately \$14.2 billion in present value dollars as at December 31, 2015. The graduated liability thresholds do not apply to incremental used fuel bundles beyond 2.23 million.

Under the ONFA, the Province guarantees OPG's annual return in the Used Fuel Fund at 3.25 percent plus the change in the Ontario CPI for funding related to the first 2.23 million used fuel bundles (committed return). OPG, and therefore the Prescribed Facilities, recognize the committed return on the Used Fuel Fund as earnings on the Nuclear Funds. The difference between the committed return and the actual market return determined based on the fair value of the fund assets related to the first 2.23 million used fuel bundles is recorded as due to or due from the Province. The amount due to or due from the Province represents the amount that would be paid to or received from the Province if the committed return were to be settled as of the balance sheet date. As prescribed under the ONFA, OPG's contributions for fuel bundles in excess of 2.23 million are not subject to the Province's guaranteed rate of return, and earn a return based on changes in the market value of the assets of the Used Fuel Fund.

Under the ONFA, the Province is entitled to any surplus in the Used Fuel Fund, subject to a threshold funded ratio of 110 percent compared to the value of the associated liabilities based on the most recently approved ONFA

Reference Plan. Upon termination of the Used Fuel Fund, the Province is entitled to any surplus above the 100 percent funded threshold.

The portion of OPG's nuclear fixed asset removal and nuclear waste management funds as at December 31 assigned to the Prescribed Facilities consists of the following:

	Fair	Value
(millions of dollars)	2015	2014
Decommissioning Fund	4,146	2 000
Decommissioning Fund Due to Province – Decommissioning Fund		3,889 (582)
	(680)	· · · /
	3,466	3,307
Used Fuel Fund <sup>1</sup>	5,101	4,624
Due to Province – Used Fuel Fund	(844)	(691)
	4,257	3,933
Total Nuclear Funds	7,723	7,240
Less: current portion	8	13
Non-current Nuclear Funds	7,715	7,227

<sup>1</sup> The Trust is estimated to represent \$1,690 million as at December 31, 2015 (2014 – \$1,506 million) of the Prescribed Facilities' portion of the Used Fuel Fund on a fair value basis. As the NFWA does not provide a basis to assign OPG's contributions to the Trust to specific stations, this amount was estimated by allocating a portion of the total OPG amount related to the Trust in the same proportion as the total balance of the Used Fuel Fund was attributed to the Prescribed Facilities.

The total fair value of the securities invested by OPG in the Nuclear Funds as at December 31 is provided below. This information is not available for the Prescribed Facilities as the Nuclear Funds are managed on an aggregate basis.

	Fair Value	
(millions of dollars)	2015	2014
Cash and cash equivalents and short-term investments	343	464
Alternative investments	1,620	1,003
Pooled funds	1,311	1,293
Marketable equity securities	8,621	8,176
Fixed income securities	6,219	5,969
Net receivables/payables	10	3
	18,124	16,908
Due to Province	(2,988)	(2,529)
	15,136	14,379

The historical cost, gross unrealized aggregate appreciation and depreciation of investment, gross unrealized foreign exchange gains, and fair value of the Nuclear Funds as of December 31, 2015 and 2014 are summarized below on a total OPG basis. This information is not available for the Prescribed Facilities as the Nuclear Funds are managed on an aggregated basis.

		2015	
	Decommissioning	Used Fuel	
(millions of dollars)	Fund	Fund	Total
Historical cost	6,608	8,819	15,427
Gross unrealized gains (losses)	1.009	4 000	0.004
Aggregate appreciation	1,098	1,283	2,381
Aggregate depreciation	(297)	(383)	(680)
Foreign exchange	425	571	996
	7,834	10,290	18,124
Due to Province	(1,285)	(1,703)	(2,988)
Total fair value	6,549	8,587	15,136
Less: current portion	5	10	15
Non-current fair value	6,544	8,577	15,121

	Decommissioning	2014 Used Fuel		
(millions of dollars)	Decommissioning Fund	Fund	Total	
Historical cost	6,188	8,163	14,351	
Gross unrealized gains (losses)				
Aggregate appreciation	1,218	1,441	2,659	
Aggregate depreciation	(150)	(174)	(324)	
Foreign exchange	90	132	222	
	7,346	9,562	16,908	
Due to Province	(1,100)	(1,429)	(2,529)	
Total fair value	6,246	8,133	14,379	
Less: current portion	7	18	25	
Non-current fair value	6,239	8,115	14,354	

Net realized and unrealized gains or losses from investments for the years ended December 31, 2015 and 2014 are summarized below on a total OPG basis. This information is not available for the Prescribed Facilities as the Nuclear Funds are managed on an aggregated basis.

		2015	
	Decommissioning	Used Fuel	
(millions of dollars)	Fund	Fund	Total
Net realized gains			
Realized gains	159	221	380
Realized foreign exchange gains	56	71	127
Net realized gains	215	292	507
Net unrealized (losses) gains			
Unrealized losses	(267)	(367)	(634)
Unrealized foreign exchange gains	335	439	774
Net unrealized gains	68	72	140

		2014				
	Decommissioning	Used Fuel				
(millions of dollars)	Fund	Fund	Total			
Net realized gains						
Realized gains	401	545	946			
Realized foreign exchange gains	36	36	72			
Net realized gains	437	581	1,018			
Net unrealized gains						
Unrealized gains	75	38	113			
Unrealized foreign exchange gains	63	82	145			
Net unrealized gains	138	120	258			

The change in the Nuclear Funds attributed to the Prescribed Facilities for the years ended December 31 is as follows:

	Fair	/alue
(millions of dollars)	2015	2014
Decempioning Fund beginning of your	2 207	2.402
Decommissioning Fund, beginning of year	3,307	3,162
Increase in fund due to return on investments	268	414
Decrease in fund due to reimbursement of expenditures	(11)	(17)
Increase in due to Province	(98)	(252)
Decommissioning Fund, end of year	3,466	3,307
Llood Fuel Fund, beginning of year	3,933	2 5 4 4
Used Fuel Fund, beginning of year		3,541
Increase in fund due to contributions made	173	170
Increase in fund due to return on investments	334	459
Decrease in fund due to reimbursement of expenditures	(30)	(25)
Increase in due to Province	(153)	(212)
Used Fuel Fund, end of year	4,257	3,933

The earnings on the Nuclear Funds attributed to the Prescribed Facilities for the years ended December 31 are as follows:

(millions of dollars)	2015	2014
Decommissioning Fund Used Fuel Fund	170 181	162 247
Total earnings	351	409

# 9. INCOME TAXES

OPG and therefore the Prescribed Facilities follow the liability method of accounting for income taxes for all business segments and record an offsetting regulatory asset or liability for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers.

Significant components of the income tax (recovery) expense of the Prescribed Facilities are presented in the table below:

(millions of dollars)	2015	2014
Current income tax expense (recovery):		
Current payable	89	84
Change in income tax positions	(10)	(15)
Income tax components of regulatory variance and deferral accounts	33	36
Scientific Research and Experimental Development investment tax credits	(54)	(26)
Other	(23)	11
	35	90
Deferred income tax (recovery) expense:		
Change in temporary differences	(4)	79
Income tax components of regulatory variance and deferral accounts	10	(120)
Regulatory asset for deferred income taxes	(56)	(22)
	(50)	(63)
Income tax (recovery) expense	(15)	27

(millions of dollars) 2015 2014 Income before income taxes and extraordinary item 134 285 Combined Canadian federal and provincial statutory enacted income tax rates 26.5% 26.5% Statutory income tax rates applied to accounting income 36 76 Increase (decrease) in income taxes resulting from: Income tax components of regulatory variance and deferral accounts 43 (84) Non-taxable income items 19 11 Regulatory asset for deferred income taxes (22) (56)Scientific Research and Experimental Development investment (41) (13)tax credits, net of income tax Other (16) 59 (51) (49) Income tax (recovery) expense (15) 27 Effective rate of income taxes (11.2%) 9.5%

A reconciliation between the statutory and the effective rate of income taxes for the Prescribed Facilities is as follows:

The income tax effects of temporary differences that give rise to deferred income tax assets and liabilities of the Prescribed Facilities as at December 31 are as follows:

(millions of dollars)	2015	2014
Deferred income tax assets:		
Nuclear fixed asset removal and nuclear waste management liabilities	2,211	2,210
Other liabilities and assets	1,455	1,624
Future recoverable Ontario minimum tax	4	-
	3,670	3,834
Deferred income tax liabilities:		
Property, plant and equipment and intangible assets	(1,185)	(1,226)
Nuclear fixed asset removal and nuclear waste management funds	(1,931)	(1,810)
Other liabilities and assets	(1,341)	(1,586)
	(4,457)	(4,622)
Net deferred income tax liabilities	(787)	(788)

During 2015, the Prescribed Facilities' financial statements recorded an increase to the deferred income tax liability for the deferred income taxes that are expected to be recovered or refunded through regulated prices charged to customers of \$59 million (2014 – \$26 million excluding the initial impact of the regulation of the Newly Regulated Hydroelectric Facilities). Since these deferred income taxes are expected to be recovered or refunded through future regulated prices, a corresponding change to the regulatory asset for deferred income taxes was recorded. As a result, the deferred income taxes for 2015 and 2014 were not impacted.

The following table summarizes the deferred income tax liabilities recorded by the Prescribed Facilities that are expected to be recovered or refunded through future regulated prices:

(millions of dollars)	2015	2014
January 1:		
Deferred income tax liabilities (assets) on temporary differences related to regulated operations	258	(5)
Deferred income tax liabilities (assets) resulting from the regulatory asset (liability) for deferred income taxes	86	(1)
	344	(6)
Impact of regulation of the Newly Regulated Hydroelectric Facilities: Deferred income tax liabilities on temporary differences as of June 30, 2014 related to the facilities prescribed for rate regulation effective in 2014 ( <i>Note</i> 3)	-	243
Deferred income tax liabilities resulting from the regulatory asset for deferred income taxes related to the rate regulation of facilities effective in 2014 ( <i>Note 3</i> )	-	81
	344	318
Changes during the year: Increase in deferred income tax liabilities on temporary differences related to regulated operations, including the Newly Regulated Hydroelectric	44	20
Facilities effective July 1, 2014 Increase in deferred income tax liabilities resulting from the regulatory asset for deferred income taxes, including the Newly Regulated Hydroelectric Facilities effective July 1, 2014	15	6
	402	244
Balance as at December 31	403	34

The tax benefit associated with an income tax position is recognized only when it is more likely than not that such a position will be sustained upon examination by the taxing authorities based on the technical merits of the position. The current and deferred income tax benefit is equal to the largest amount, considering possible settlement outcomes, that is greater than 50 percent likely of being realized upon settlement with the taxing authorities.

As OPG files income tax returns and pays income taxes on an aggregate basis for all of its operations, information on unrecognized tax benefits is provided on a total OPG basis. A reconciliation of the beginning and ending amount of OPG's total unrecognized tax benefits is provided in the table below.

(millions of dollars)	2015	2014
Unrecognized tax benefits, beginning of year	79	91
Additions based on tax positions related to the current year	16	11
Additions for tax positions of prior years	7	12
Reductions for tax positions of prior years	(14)	(35)
Other	(16)	-
Unrecognized tax benefits, end of year	72	79

As at December 31, 2015, OPG's unrecognized tax benefits were \$72 million (2014 – \$79 million), excluding interest and penalties, all of which, if recognized, would affect OPG's and the Prescribed Facilities' effective tax rate. Changes in unrecognized tax benefits over the next 12 months cannot be predicted with certainty.

OPG recognizes interest and penalties related to unrecognized tax benefits as income tax expense. As at December 31, 2015, OPG has recorded interest on unrecognized tax benefits of \$7 million (2014 – \$6 million) in its consolidated financial statements. OPG considers its significant tax jurisdiction to be Canada. OPG remains subject to income tax examination for years after 2012.

Cash income taxes are paid and tax refunds are received by OPG for all of its operations, including the Prescribed Facilities, on an aggregate basis. OPG paid \$47 million in income taxes (net of tax refunds) during 2015. The amount of tax refunds received net of income taxes paid during 2014 was \$29 million.

The net assets contributed by the Newly Regulated Hydroelectric Facilities as at January 1, 2014 included \$181 million in net deferred income tax liabilities, which were reflected as a decrease of \$246 million in the Prescribed Facilities' net capital as at January 1, 2014 and an increase of \$65 million in the Prescribed Facilities AOCI as at January 1, 2014.

# 10. PENSION AND OTHER POST-EMPLOYMENT BENEFITS

## **Fund Assets**

The OPG registered pension fund is managed on an aggregate basis for all of OPG's operations and the information on fund assets is presented below on this basis. There is no separate registered pension fund for the Prescribed Facilities.

The OPG registered pension fund investment guidelines are stated in an approved Statement of Investment Policies and Procedures (SIPP). The SIPP is reviewed and approved by the Audit and Risk Committee of OPG's Board of Directors at least annually and includes a discussion of investment objectives and expectations, asset mix and rebalancing, and the basis for measuring the performance of the pension fund assets.

In accordance with the SIPP, investment allocation decisions are made with a view to achieve OPG's objective of meeting obligations of the plan as they come due. The pension fund assets are invested in three categories of asset classes. The first category is liability hedging assets, which are intended to hedge the inflation and interest rate sensitivity of the plan liabilities. The second category is return enhancing assets, which are intended to obtain higher investment returns compared to the returns expected for liability hedging assets. The third category is return diversifying strategies, which are intended to improve the overall return of the pension fund while mitigating the downside market risk.

To achieve the above objective, OPG has adopted the following target strategic asset allocation:

	Target
Asset Class	
Liability Hedging Assets	54%
Return Enhancing Assets	33%
Return Diversifying Assets	13%

The plan may enter into derivative securities, such as interest rate swaps and forward foreign exchange contracts, for risk management purposes, where such activity is consistent with the plan's investment objectives.

## Significant Concentrations of Risk in Fund Assets

The assets of the pension fund are diversified to limit the impact of any individual investment. The pension fund is diversified across multiple asset classes. Fixed income securities are diversified among Canadian government bonds, government agency bonds, real return bonds, corporate bonds, and an interest rate overlay hedging program, which is disclosed under pooled funds. Equity securities are diversified across Canadian, US, and non-North American stocks. There are also real estate, infrastructure, and agriculture portfolios that represent approximately nine percent of the total pension fund assets as at December 31, 2015. Investments in the above asset classes are further diversified across funds, investment managers, strategies, vintages, sectors and geographies, depending on the specific characteristics of each asset class.

Credit risk with respect to the pension fund's fixed income securities is managed by risk tolerance guidelines, which requires that fixed income securities comply with various investment constraints that ensure prudent diversification and prescribed minimum required credit rating quality. Credit risk as it relates to the pension fund's derivatives is managed through the use of International Swap and Derivatives Association documentation and counterparty management performed by the fund's investment managers.

# Risk Management

Risk management oversight with respect to the pension fund includes, but is not limited to, the following activities:

- Periodic asset/liability management and strategic asset allocation studies
- Monitoring of funding levels and funding ratios
- Monitoring compliance with asset allocation guidelines and investment management agreements
- Monitoring asset class performance against asset class benchmarks
- Monitoring investment manager performance against benchmarks
- Monitoring of risk tolerance guidelines.

## Expected Rate of Return on Plan Assets

The expected rate of return on plan assets is based on the fund's asset allocation, as well as return expectations considering long-term historical risks and returns associated with each asset class within the plan portfolio. The asset management decisions consider the economic liabilities of the plan.

## **Fair Value Measurements**

OPG is required to classify fair value measurements using a fair value hierarchy. This hierarchy groups financial instruments into three levels, based on the significance of inputs used in measuring the fair value of the assets and liabilities. Refer to Note 12 for a detailed discussion of fair value measurements and the fair value hierarchy.

The tables below present registered pension plan assets for all of OPG's operations measured at fair value in accordance with the fair value hierarchy. This information is not available separately for the Prescribed Facilities, as the OPG registered pension fund is managed on an aggregate basis for all of OPG's operations.

		Decembe	r 31, 2015	
(millions of dollars)	Level 1	Level 2	Level 3	Total
Cash and cash equivalents	374	-	_	374
Short-term investments	-	1	-	1
Fixed income		•		•
Corporate debt securities	-	392	-	392
Government bonds	-	3,794	-	3,794
Equities		•,•••		•,.•
Canadian	1,547	-	-	1,547
US	1,786	-	-	1,786
Non-North American	1,992	-	-	1,992
Pooled funds	21	147	1,878	2,046
Infrastructure	-	-	702	702
Agriculture	-	-	402	402
Real estate	-	-	107	107
Other	1	-	6	7
	5,721	4,334	3,095	13,150 <sup>1</sup>

<sup>1</sup> The table above excludes pension fund receivables and payables.

		December 31, 2014			
(millions of dollars)	Level 1	Level 2	Level 3	Total	
Cash and cash equivalents	251	-	-	251	
Short-term investments	-	3	-	3	
Fixed income					
Corporate debt securities	-	349	-	349	
Government bonds	-	1,704	-	1,704	
Equities					
Canadian	1,955	-	-	1,955	
US	2,016	-	-	2,016	
Non-North American	2,147	-	-	2,147	
Pooled funds	12	2,450	866	3,328	
Infrastructure	-	-	338	338	
Real estate	-	-	243	243	
Agriculture	-	-	57	57	
Other	-	-	5	5	
	6,381	4,506	1,509	12,396	

<sup>1</sup> The table above excludes pension fund receivables and payables.

The following tables present the changes in the fair value of financial instruments classified in Level 3:

		For the	years end	led December	31	
	Pooled	Pooled Real				
(millions of dollars)	Funds	Infrastructure	Estate	Agriculture	Other	Total
Opening balance, January 1, 2014	11	208	210	57	2	488
Total realized and unrealized gains	69	37	19	-	-	125
Purchases, sales, and settlements	786	93	14	-	3	896
Closing balance, December 31, 2014	866	338	243	57	5	1,509
Total realized and unrealized gains	247	91	58	-	-	396
Purchases, sales, and settlements	765	273	101	50	1	1,190
Closing balance, December 31, 2015	1,878	702	402	107	6	3,095

During the years ended December 31, 2015 and 2014, there were no transfers between Level 1 and Level 2.

## **Plan Costs and Liabilities**

OPG does not maintain separate pension and OPEB plans for the Prescribed Facilities. As of April 1, 2005, the effective date of the regulated prices established by the Province for the generation of the Previously Regulated Facilities prior to their regulation by the OEB, accrued assets and liabilities for pensions and OPEB recognized in OPG's consolidated financial statements, which were prepared in accordance with Canadian generally accepted accounting principles prior to January 1, 2012, were allocated among the Previously Regulated Facilities, OPG's other hydroelectric operations inclusive of the Newly Regulated Hydroelectric Facilities, and OPG's other operations. This allocation was determined on the basis of the number of regular OPG employees associated with the corresponding parts of OPG's business.

Subsequent to April 1, 2005, the majority of OPG's recognized post-employment benefit plan costs attributed to each of the Previously Regulated Facilities, OPG's other hydroelectric operations inclusive of the Newly Regulated Hydroelectric Facilities, and OPG's other operations are determined using direct assignment, primarily on the basis of labour costs incurred by the employees associated with the corresponding parts of OPG's business. The post-employment benefit plan costs associated with OPG's corporate support services are allocated to each of OPG's operations as part of the allocation of corporate support services costs, consistent with the methodology outlined in

independent cost allocation studies, the results of which were reflected in the regulated prices established by the OEB Decisions.

Following OPG's adoption of US GAAP effective January 1, 2012, unamortized actuarial gains or losses and past service costs or credits for pension and OPRB plans are recognized in AOCI and reported on the consolidated balance sheet as part of pension and OPEB liabilities that represent the funded status of these plans. The accumulated unamortized amounts as of the consolidated balance sheet date are allocated to each of the Previously Regulated Facilities, OPG's other hydroelectric operations inclusive of the Newly Regulated Hydroelectric Facilities, and OPG's other operations primarily in proportion to the allocation of the respective benefit costs for the year then ended.

As at December 31, 2013, a portion of OPG's pension and OPEB liabilities attributed to all of the company's hydroelectric operations other than the regulated hydroelectric facilities prescribed for rate regulation prior to 2014 was allocated to the Newly Regulated Hydroelectric Facilities, primarily using a combination of the number of regular employees and labour costs associated with these facilities. The resulting liabilities attributed to the Newly Regulated Hydroelectric Facilities. The resulting liabilities attributed to the Newly Regulated Hydroelectric Facilities were \$194 million for the pension plans and \$149 million for the OPEB plans. Combined, these liabilities were reflected as a decrease of \$86 million (before taxes) in the Prescribed Facilities' net capital as at January 1, 2014 and a decrease of \$256 million (before taxes) in the Prescribed Facilities' AOCI as at January 1, 2014.

Subsequent to December 31, 2013, a portion of the costs and AOCI balances attributed to OPG's hydroelectric operations other than the previously hydroelectric facilities is allocated to the Newly Regulated Hydroelectric Facilities primarily on the basis of the number of full-time equivalent employees.

The OCI activity reported by the Prescribed Facilities during the year with respect to pension and OPEB plans represents the change during that year in the corresponding unamortized AOCI balances attributed to the Prescribed Facilities.

Pension fund contributions and expenditures on OPEB and supplementary pension plans are primarily allocated to the Prescribed Facilities in proportion to the respective benefit costs, using the methodology reflected in the regulated prices established by the OEB Decisions. For 2015, excluding the NWMO, \$331 million of OPG's total contribution of \$359 million to its registered pension plan was attributed to the Prescribed Facilities (2014 – \$322 million of OPG's total contribution of \$360 million). Excluding the NWMO, \$22 million of OPG's total expenditures for its supplementary pension plan of \$24 million in 2015 and \$86 million of OPG's total OPEB plan expenditures of \$93 million in 2015 were attributed to the Prescribed Facilities. For 2014, excluding the NWMO, \$14 million of OPG's total expenditures for its supplementary pension plan of \$16 million and \$83 million of its total OPEB plan expenditures of \$93 million were attributed to the Prescribed Facilities.

Separate actuarial assumptions are not made to derive pension and OPEB costs and obligations for the Prescribed Facilities. The assumptions used to derive OPG's total pension and OPEB obligations and costs, and therefore such amounts attributed to the Prescribed Facilities, are presented in the table below. These assumptions include those relating to post-employment benefit plans of the NWMO.

	Registered and Supplementary Pension Plans		Other Post-Employme Benefits	
	2015	2014	2015	2014
Weighted Average Assumptions – Benefit Obligations at Year-End				
Rate used to discount future benefits	4.10%	4.00%	4.13%	4.03%
Salary schedule escalation rate – first six years	1.60%	2.00%	1.60%	2.00%
- thereafter	2.50%	2.50%	2.50%	2.50%
Rate of cost of living increase to pensions	2.00%	2.00%	n/a	n/a
Initial health care trend rate	n/a	n/a	6.00%	6.09%
Ultimate health care trend rate	n/a	n/a	4.33%	4.33%
Year ultimate health care trend rate reached	n/a	n/a	2030	2030
Rate of increase in disability benefits	n/a	n/a	2.00%	2.00%

	Registered and Supplementary Pension Plans			Employment efits
	2015	2014	2015	2014
Weighted Average Assumptions – Costs for the Year				
Expected return on plan assets, net of expenses	6.25%	6.25%	n/a	n/a
Rate used to discount future benefits	4.00%	4.90%	4.03%	4.91%
Salary schedule escalation rate – first six years	2.00%	2.50%	2.00%	2.50%
- thereafter	2.50%	2.50%	2.50%	2.50%
Rate of cost of living increase to pensions	2.00%	2.00%	n/a	n/a
Initial health care trend rate	n/a	n/a	6.09%	6.19%
Ultimate health care trend rate	n/a	n/a	4.33%	4.34%
Year ultimate health care trend rate reached	n/a	n/a	2030	2030
Rate of increase in disability benefits	n/a	n/a	2.00%	2.00%
Expected average remaining service life for employees (years)	12	12	13	13

The components of OPG's post-employment benefit costs attributed to the Prescribed Facilities for the years ended December 31, including those related to the post-employment benefits of the NWMO, are provided below. The costs were attributed to the Prescribed Facilities using the methodology reflected in the regulated prices established by the OEB Decisions.

	0		Supplementary Pension Plans		Other Post- Employment Benefits	
(millions of dollars)	2015	2014	2015	2014	2015	2014
Components of Cost Recognized						
Current service costs	295	213	7	7	65	58
Interest on projected benefit obligation	581	590	12	12	117	120
Expected return on plan assets, net of expenses	(661)	(563)	-	-	-	-
Amortization of net actuarial loss <sup>1</sup>	269	233	5	4	26	6
Recognition of LTD net actuarial loss (gain)	-	-	-	-	6	(3)
Costs recognized <sup>2</sup>	484	473	24	23	214	181

<sup>1</sup> The amortization of net actuarial loss was recognized as an increase to OCI. In 2015, this increase was offset by the impact of the Pension and OPEB Regulatory Asset discussed in Note 5. In 2014, this increase was partially offset by the impact of the Pension and OPEB Regulatory Assets.

<sup>2</sup> Excludes the impact of regulatory variance and deferral accounts discussed in Note 5.

Total post-employment benefit costs attributed to the Prescribed Facilities for the years ended December 31 including the impact of the regulatory variance and deferral accounts are as follows:

(millions of dollars)	2015	2014
Registered pension plans	484	473
Supplementary pension plans	24	23
Other post-employment benefits	214	181
Pension and OPEB Cost Variance Account (Note 5)	-	(254)
Pension & OPEB Cash Payment Variance Account (Note 5)	(21)	(6)
Pension & OPEB Cash Versus Accrual Differential Deferral Account (Note 5)	(279)	(36)
Pension and other post-employment benefit costs	422	381

The following table provides the pension and OPEB liabilities reported by the Prescribed Facilities and their classification on the balance sheets as at December 31:

	Registered Pension Plans		Supplementary Pension Plans		Other Post- Employment Benefits	
(millions of dollars)	2015	2014	2015	2014	2015	2014
Current liabilities Non-current liabilities	- (2,223)	- (2,988)	(16) (244)	(8) (266)	(87) (2,665)	(78) (2,616)
Total liabilities	(2,223)	(2,988)	(260)	(274)	(2,752)	(2,694)

OPG's total accumulated benefit obligations for the registered pension plans and supplementary pension plans as at December 31, 2015 are \$14,327 million and \$267 million, respectively (2014 – \$14,333 million and \$274 million, respectively). The accumulated benefit obligation differs from the projected benefit obligation in that the accumulated benefit obligation about future compensation levels.

The following table provides the components of the Prescribed Facilities' OCI related to pension and OPEB plans and the offsetting Pension and OPEB Regulatory Asset discussed in Note 5 for the years ended December 31, on a pretax basis:

	Registered Pension Plans		Supplementary Pension Plans		Other Post- Employment Benefits	
(millions of dollars)	2015	2014	2015	2014	2015	2014
Changes in plan assets and benefit obligations recognized in OCI						
Current year net actuarial (gain) loss	(647)	875	(10)	22	(49)	295
Current year past service costs	-	-	-	-	5	-
Amortization of net actuarial loss	(269)	(233)	(5)	(4)	(26)	(6)
Total (increase) decrease in OCI Less: Decrease (increase) in Pension and OPEB Regulatory Asset, excluding initial regulatory asset related to facilities prescribed for rate regulation beginning in 2014	(916) 916	642 (652)	(15) 15	18 (19)	(70) 70	289 (289)
Less: Recognition of initial pension and OPEB regulatory asset related to facilities prescribed for rate regulation beginning in 2014 ( <i>Note 3</i> )	-	(219)	-	(5)	-	(21)
Net increase in OCI	-	(229)	-	(6)	-	(21)

The following table provides the components of the Prescribed Facilities' AOCI related to pension and OPEB plans that have not yet been recognized as components of benefit costs and the offsetting Pension and OPEB Regulatory Asset as at December 31, on a pre-tax basis:

	Registered Supplementary Pension Plans Pension Plans		Other Post- Employment Benefits			
(millions of dollars)	2015	2014	2015	2014	2015	2014
Unamortized amounts recognized in AOCI Past service costs		-	-	-	6	1
Net actuarial loss	2,786	3,702	73	88	497	572
Total recognized in AOCI Less: Pension and OPEB Regulatory Asset (Note 5)	2,786 2,786	3,702 3,702	73 73	88 88	503 503	573 573
Net recognized in AOCI	-	-	-	-	-	-

The following table provides the components of the Prescribed Facilities' AOCI and the offsetting Pension and OPEB Regulatory Asset as at December 31 (included in the table above) that are expected to be amortized as components of benefit costs and recognized as increases to OCI and reductions in the Pension and OPEB Regulatory Asset, in 2016, on a pre-tax basis:

(millions of dollars)	Registered Pension Plans	Supplementary Pension Plans	Other Post- Employment Benefits
Past service costs Net actuarial loss	- 177	- 4	1 17
Total increase in AOCI Less: Estimated decrease in Pension and OPEB	177 177 177	4 4	18 18
Regulatory Asset			

Based on the most recently filed actuarial valuation for funding purposes of the OPG registered pension plan, as at January 1, 2014, there was an unfunded liability on a going concern basis of \$1,143 million and a deficiency on a wind-up basis of \$7,034 million. The funded status to be determined in the next filed funding valuation, which must have an effective date no later than January 1, 2017, could be significantly different. The amount of OPG's additional, voluntary contribution, if any, is revisited from time to time. OPG will continue to assess the requirements for contributions to the pension plan. This information is not available for the Prescribed Facilities, as separate actuarial valuations for funding purposes are not performed for the Prescribed Facilities.

OPG's required contribution to its registered pension plan for 2016 is currently expected to be \$353 million, of which \$327 million is estimated to be attributable to the Prescribed Facilities. The amount of OPG's additional, voluntary contribution, if any, is revisited from time to time. OPG will continue to assess the requirements for contributions to the pension plan.

The supplementary pension plans are not funded, but are secured by Letters of Credit totaling \$345 million as at December 31, 2015 (2014 – \$310 million) for all of OPG's operations.

Estimated future benefit payments to all participants in the pension and OPEB plans on an OPG-wide basis based on the assumptions used to measure the benefit obligations as at December 31, 2015 are presented in the table below. These benefit plans are managed on an aggregate basis for all of OPG's operations.

(millions of dollars)	Registered Pension Plans	Supplementary Pension Plans	Other Post- Employment Benefits
2016	661	18	103
2017	664	19	107
2018	750	19	111
2019	726	19	115
2020	764	20	121
2021 through 2025	4,099	105	676

A one percent increase or decrease in OPG's health care trend rate assumption would result in an increase in the current service and interest components of the 2015 OPEB cost recognized in the Prescribed Facilities' financial statements of approximately \$41 million (2014 – \$38 million) or a decrease in the service and interest components of the 2015 OPEB cost recognized in the Prescribed Facilities' financial statements of approximately \$30 million (2014 – \$28 million).

A one percent increase or decrease in the health care trend rate would result in an increase in OPG's total projected OPEB obligation at December 31, 2015 of \$584 million (2014 – \$567 million) or a decrease in OPG's total projected OPEB obligation at December 31, 2015 of \$446 million (2014 – \$432 million).

# 11. RISK MANAGEMENT AND DERIVATIVES

The Prescribed Facilities are exposed to risks related to changes in market interest rates through the debt owed to OPG and movements in foreign currency that affect its assets, liabilities, and forecasted transactions. Select derivative instruments are used by OPG to manage such risks related to changes in market interest rates and movements in foreign currency, and a portion of the financial impacts of these instruments is attributed to the Prescribed Facilities. OPG's derivatives attributed in whole or in part to the Prescribed Facilities are used as hedging instruments only.

Interest rate risk is the risk that the value of assets and liabilities can change due to movements in related interest rates. Interest rate risk for OPG, and therefore the Prescribed Facilities through the debt and net interest expense derivation methodologies established by the OEB Decisions, arises with the need to refinance existing debt and/or undertake new financing. The management of these risks includes using derivatives, a portion of the financial impact of which is included in the derivation of the Prescribed Facilities' net interest expense on the long-term debt, to hedge the exposure in accordance with corporate risk management policies. OPG periodically uses interest rate swap agreements to mitigate elements of interest rate risk exposure associated with anticipated financing. A portion of applicable gains and losses on OPG's interest rate hedges that are effective is reflected in the net interest expense of the Prescribed Facilities, using the methodology approved in the OEB Decisions for the determination of interest expense.

The Prescribed Facilities' financial results are exposed to volatility in the Canadian/US foreign exchange rate as fuels and certain supplies and services purchased by OPG for generating stations and major development projects are primarily denominated in, or tied to US dollars. OPG enters into foreign exchange derivatives and agreements with major financial institutions, when appropriate, in order to manage the exposure to foreign currency movements. The financial impacts of hedging derivative instruments related to movements in foreign currency are attributed to the Prescribed Facilities on the basis of the underlying assets, liabilities, or forecasted transactions.

During the period from January 1, 2014 to October 31, 2014, the Prescribed Facilities were exposed to the risk of adverse changes in electricity prices associated with a wholesale spot market for electricity, as the revenue from electricity generated by the Newly Regulated Hydroelectric Facilities during that period was based on the Ontario

electricity spot market price. Effective November 1, 2014, this risk exposure has been largely mitigated with the implementation of a regulated price for these facilities.

The majority of OPG and the Prescribed Facilities' revenues are derived from sales through the IESO-administered spot market. Market participants in the IESO spot market provide collateral in accordance with the IESO prudential support requirements to cover funds that they might owe to the market. Although the credit exposure to the IESO represents a significant portion of both OPG and the Prescribed Facilities' accounts receivable, OPG's management accepts this risk due to the IESO's primary role in the Ontario electricity market. The remaining receivables exposure is to a diverse group of generally high quality counterparties. The portion of OPG's allowance for doubtful debts attributed to the Prescribed Facilities and reported in these financial statements at December 31, 2015 was less than \$1 million.

The following table shows amounts related to derivatives recorded in and reclassified from AOCI for the years ended December 31, on a pre-tax basis:

(millions of dollars)	2015	2014
Cash flow hedges Gains in OCI	1	1
Reclassification of losses from AOCI	11	9

As at December 31, 2015, existing net losses of \$11 million deferred in AOCI were expected to be reclassified from AOCI within the next 12 months.

# 12. FAIR VALUE MEASUREMENTS

OPG is required to classify fair value measurements using a fair value hierarchy. This hierarchy groups financial assets and liabilities into three levels, based on the inputs used in measuring the fair value of the financial assets and liabilities. The fair value hierarchy has the following levels:

- Level 1: Valuation of inputs is based on unadjusted quoted market prices observed in active markets for identical assets or liabilities.
- Level 2: Valuation is based on inputs other than quoted prices under Level 1 that are observable for the asset or liability, either directly or indirectly.
- Level 3: Valuation is based on inputs for the asset or liability that are not based on observable market data.

The fair value of financial instruments traded in active markets is based on quoted market prices at the balance sheet dates. A market is regarded as active if quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service, or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis. The quoted market price used for financial assets attributed to the Prescribed Facilities is the current bid price. These instruments are included in Level 1 and are comprised primarily of equity investments and fund investments.

For financial instruments for which quoted market prices are not directly available, fair values are estimated using forward price curves developed from observable market prices or rates. The estimation of fair value may include the use of valuation techniques or models, based wherever possible on assumptions supported by observable market prices or rates prevailing at the balance sheet dates. This is the case for over-the-counter derivatives and securities, which include energy commodity derivatives, foreign exchange derivatives, interest rate swap derivatives, and fund investments. Pooled fund investments are valued at the unit values supplied by the pooled fund administrators. The unit values represent the underlying net assets at fair values, determined using closing market prices. Valuation models use general assumptions and market data and therefore do not reflect the specific risks and other factors that

would affect a particular instrument's fair value. The methodologies used for calculating the fair value adjustments are reviewed on an ongoing basis to ensure that they remain appropriate. If all significant inputs required to fair value an instrument are observable, the instrument is included in Level 2.

If one or more of the significant inputs is not based on observable market data, the instrument is included in Level 3. Specific valuation techniques are used to value these instruments. Significant Level 3 inputs include: recent comparable transactions, comparable benchmark information, bid/ask spread of similar transactions, and other relevant factors.

Transfers into, out of, or between hierarchy levels are deemed to have occurred on the date of the event or change in circumstances that caused the transfer to occur.

OPG is required to determine the fair value of all its financial instruments. The following is a summary of OPG's financial instruments attributed to the Prescribed Facilities as at December 31, the impact of which is reported in these financial statements:

	Fa Va	air Iue	Carrying Value <sup>1</sup>		
(millions of dollars)	2015	2014	2015	2014	Balance Sheet Line Item
Nuclear fixed asset removal and nuclear waste management funds (includes current portion)	7,723	7,240	7,723	7,240	Nuclear fixed asset removal and nuclear waste management funds
Other financial instruments	(6)	1	(6)	1	Long-term accounts payable and accrued charges/Other accounts receivable and prepaid expenses
Long-term debt	(5,446)	(5,235)	(5,446)	(5,235)	Long-term debt

<sup>1</sup> The carrying values of other financial instruments included in cash and cash equivalents, receivables from related parties, other accounts receivable and prepaid expenses, accounts payable and accrued charges, and due to Ontario Power Generation Inc. approximate their fair values due to the immediate or short-term maturity of these financial instruments.

The following tables present financial assets and liabilities of the Prescribed Facilities measured at fair value in accordance with the fair value hierarchy. The net changes in amounts related to the Nuclear Funds for the respective years were estimated in proportion to the Prescribed Facilities' portion of OPG's total balance of the Nuclear Funds.

		Decembe	r 31, 2015	
(millions of dollars)	Level 1	Level 2	Level 3	Total
Assets				
Decommissioning Fund	1,694	1,446	326	3,466
Used Fuel Fund	338	3,860	59	4,257
Total	2,032	5,306	385	7,723
Liabilities				
Other financial instruments	(6)	-	-	(6)
Total	(6)	-	-	(6)
Net assets	2,026	5,306	385	7,717

	December 31, 2014						
(millions of dollars)	Level 1	Level 2	Level 3	Total			
Assets							
Decommissioning Fund	1,626	1,475	206	3,307			
Used Fuel Fund	298	3,600	35	3,933			
Other	-	1	-	1			
Nataoosta	1.004	E 076	244	7 0 4 4			
Net assets	1,924	5,076	241	7,241			

During the year ended December 31, 2015, there were no transfers between Level 1 and Level 2. In addition, there were no transfers into and out of Level 3.

The following tables present the changes in assets and liabilities of the Prescribed Facilities measured at fair value based on Level 3 for the years ended December 31:

(millions of dollars)	Decom- missioning Fund	Used Fuel Fund
Opening balance, January 1, 2014	131	20
Unrealized gains included in earnings on Nuclear Funds	10	20
	10	2
Realized gains included in revenue	1	-
Purchases	78	14
Sales	(6)	(1)
Settlements	(8)	-
Closing balance, December 31, 2014	206	35
Unrealized gains included in earnings on Nuclear Funds	31	5
Realized gains included in revenue	1	1
Purchases	101	18
Sales	(6)	(1)
Settlements	(7)	1
Closing balance, December 31, 2015	326	59

# **Nuclear Funds**

OPG's Nuclear Funds' investments classified as Level 3 consist of infrastructure, real estate, and agriculture investments within the alternative investment portfolio. The fair value of the investments within the Nuclear Funds' alternative investment portfolio is determined using acceptable industry valuation methods, such as recent arm's length market transactions, reference to comparable securities of issuers with similar credit ratings, discounted cash flow analyses, third-party independent appraisals, valuation multiples, or other valuation methods. Any control, size, liquidity or other discounts or premiums on the investments are considered in the determination of fair value.

The process of valuing investments for which no published market price exists is based on inherent uncertainties and the resulting values may differ from values that would have been used had a ready market existed for the investments. The values may also differ from the prices at which the investments may be sold.

The table below presents the classes of investments within OPG's total Nuclear Funds that are reported on the basis of net asset value as at December 31, 2015. This information is not available separately for the Prescribed Facilities as the Nuclear Funds are managed on a total basis for all of OPG's nuclear stations.

(millions of dollars except where noted)	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice
Infrastructure	979	385	n/a	n/a
Real Estate	600	226	n/a	n/a
Agriculture	41	160	n/a	n/a
Pooled Funds				
Short-term Investments	5	n/a	Daily	1 - 5 Days
Fixed Income	609	n/a	Daily	1 - 5 Days
Equity	698	n/a	Daily	1 - 5 Days
Total	2,932	771		

The fair value of the above investments is classified as either Level 2 or Level 3.

#### Infrastructure

This class includes investments in funds whose investment objective is to generate a combination of long-term capital appreciation and current income, generally through investments such as energy, transportation and utilities. The fair values of investments in this class have been estimated using the Nuclear Funds' ownership interest in partners' capital and/or underlying investments held by subsidiaries of an infrastructure fund.

The investments in the respective infrastructure funds are not redeemable. However, the Nuclear Funds may transfer any of its partnership interests/shares to another party, as stipulated in the partnership agreements and/or shareholders' agreements. Distributions from each infrastructure fund will be received based on the operations of the underlying investments and/or as the underlying investments of the infrastructure funds are liquidated. It is not possible to estimate when the underlying assets of the infrastructure funds will be liquidated. However, the infrastructure funds have a maturity end period ranging from 2019 to 2025.

# Real Estate

This class includes investment in institutional-grade real estate property located in Canada. The investment objective is to provide a stable level of income with the opportunity for long-term capital appreciation. The fair values of the investments in this class have been estimated using the net asset value of the Nuclear Funds' ownership interest in these investments. The partnership investments are not redeemable. However, the Nuclear Funds may transfer any of their partnership interests to another party, as stipulated in the partnership agreement, with prior written consent of the other limited partners. For investments in private real estate corporations, shares may be redeemed through a pre-established redemption process. It is not possible to estimate when the underlying assets in this class will be liquidated.

## Agriculture

This class includes a diversified portfolio of global farmland and timberland investments. The investment objective is to provide a differentiated return source, income yield, and inflation protection. The fair values of the investments in this class have been estimated using the net asset value of the Nuclear Funds' ownership interest in these investments. The investments are not redeemable. However, the Nuclear Funds may transfer any of their interests to another party, as stipulated in the shareholders' agreement, with prior written consent of the other shareholders.

## Pooled Funds

This class represents investments in pooled funds, which primarily include a diversified portfolio of fixed income securities, issued mainly by Canadian corporations and diversified portfolios of Emerging Market listed equity. The

investment objective of the pooled funds is to achieve capital appreciation and income through professionally managed portfolios. The fair value of the investments in this class has been estimated using the net asset value per share of the investments. There are no significant restrictions on the ability to sell investments in this class.

## **13. COMMITMENTS AND CONTINGENCIES**

# Litigation

Various legal proceedings are pending against OPG and its subsidiaries covering a wide range of matters that arise in the ordinary course of their business activities. These proceedings may impact the Prescribed Facilities. Each of these matters is subject to various uncertainties. Some of these matters may be resolved unfavourably with respect to OPG and the Prescribed Facilities. While it is not possible to determine the ultimate outcome of the various pending actions, it is OPG's belief that their resolution is not likely to have a material adverse effect on the financial position of OPG or the Prescribed Facilities.

## **Contractual and Commercial Commitments**

The portions of OPG's contractual obligations and other significant commercial commitments related to the Prescribed Facilities as at December 31, 2015 were determined primarily using specific identification, and are as follows:

(millions of dollars)	2016	2017	2018	2019	2020	Thereafter	Total
Contractual obligations:							
Fuel supply agreements	153	154	144	78	47	54	630
Contributions under the ONFA <sup>1</sup>	177	156	175	266	35	1,162	1,971
Contributions to the OPG registered pension plan <sup>2</sup>	327	-	-	-	-	-	327
Operating lease obligations	15	15	15	14	14	47	120
Commitments related to Darlington Refurbishment <sup>3</sup>	284	-	-	-	-	-	284
Operating licence	41	43	37	23	24	142	310
Unconditional purchase obligations	60	54	51	50	49	4	268
Accounts payable and accrued charges	783	2	6	-	-	2	793
Other	38	14	5	2	2	69	130
Total	1,878	438	433	433	171	1.480	4.833

<sup>1</sup> Contributions under the ONFA are based on the 2012 ONFA Reference Plan contribution schedule approved in 2012. The updated ONFA Reference Plan is expected to be effective January 1, 2017.

<sup>2</sup> The pension contributions reflect current ongoing funding requirements and additional funding requirements towards the deficit, in accordance with the actuarial valuation of the OPG registered pension plan as at January 1, 2014. The next actuarial valuation of the OPG registered pension plan as at January 1, 2017. The pension contributions are affected by various factors including market performance, changes in actuarial assumptions, plan experience, changes in the pension regulatory environment, and the timing of funding valuations. Funding requirements after 2016 are excluded due to significant variability in the assumptions required to project the timing of future cash flows. The amount of OPG's additional, voluntary contribution, if any, is revisited from time to time.

<sup>3</sup> Estimated currently committed costs to close the project, including demobilization of project staff and cancellation of existing contracts and material orders.

Contractual and commercial commitments as noted exclude certain purchase orders, as they represent purchase authorizations rather than legally binding contracts, and are subject to change without significant penalties.

## **Collective Bargaining Agreements**

As at December 31, 2015, the Power Workers' Union (PWU) represented approximately 5,300 OPG regular employees or approximately 57 percent of OPG's regular workforce. The previous collective agreement between OPG and the PWU expired on March 31, 2015. In May 2015, the parties agreed to renew the collective agreement

for a three-year term, expiring on March 31, 2018. The changes to the collective agreement include increases to employee pension plan contributions in each year of the agreement.

As at December 31, 2015, the Society of Energy Professionals (The Society) represented approximately 2,950 OPG employees or approximately 32 percent of OPG's regular workforce. The governing collective agreement between OPG and The Society expired on December 31, 2015. In November 2015, the parties agreed to renew the collective agreement for a three-year term, expiring on December 31, 2018. The changes to the collective agreement include increases to employee pension plan contributions in each of the first two years of the agreement.

The changes to both collective agreements will provide existing employees with lump sum payments for each of the first two years of the contract and eligibility to annually receive shares in Hydro One Inc. (Hydro One) for up to 15 years starting in year three of the contract, as long as these employees continue to make contributions to the OPG pension plan. The contract term was conditional on the initial public offering of Hydro One shares, which occurred in November 2015.

In April 2016, OPG acquired nine million common shares of Hydro One at \$23.65 per share as part of a secondary share offering by the Province through a syndicate of underwriters. OPG paid the same price as other investors in the offering. The acquisition was made for investment purposes to mitigate the risk of future price volatility related to OPG's future share delivery obligations under the collective agreements. The shares acquired in this transaction represent the substantial majority of OPG's currently anticipated purchases of Hydro One shares.

Approximately 92 percent of OPG's regular labour force as at December 31, 2015 was estimated to relate to the Prescribed Facilities.

# 14. BUSINESS SEGMENTS

The Prescribed Facilities have three reportable business segments. The business segments are Nuclear Generation, Nuclear Waste Management, and Hydroelectric. Starting on January 1, 2014, the Hydroelectric segment includes the results of the Newly Regulated Hydroelectric Facilities, which became rate regulated in that year.

As a result of the basis of presentation of these financial statements described in Note 2, the financial position and results of operations of the business segments reported in these financial statements will not be identical to the financial position and results of operations that would have resulted had the Prescribed Facilities historically operated on a stand-alone basis, and may differ from the financial position and results of operations of the business segments reported in OPG's consolidated financial statements.

OM&A expenses of the Prescribed Facilities' generation business segments include a service fee for the use of certain PP&E and intangible assets held by OPG's unregulated operations. The service fee is recorded in OM&A expenses with a corresponding payable in the due to/from account with OPG. For the year ended December 31, 2015, the service fee was \$33 million for the Nuclear Generation segment and \$6 million for the Hydroelectric segment. For the year ended December 31, 2014, the service fee was \$23 million for the Nuclear Generation segment and \$6 million for the Hydroelectric segment and \$6 million for the Hydroelectric segment.

# **Nuclear Generation Segment**

The Nuclear Generation business segment operates in Ontario, generating and selling electricity from the Pickering GS and the Darlington GS, both owned and operated by OPG. The business segment also includes revenue earned from heavy water sales, isotope sales, detritiation services, and ancillary services for voltage control and reactive support. These revenues are included by the OEB in determining the regulated prices for the nuclear stations of the Prescribed Facilities, which has had the effect of reducing these prices.

#### **Nuclear Waste Management Segment**

The Nuclear Waste Management business segment reports the results of operations associated with the management of nuclear used fuel and L&ILW produced by the Darlington and Pickering nuclear generating stations, the decommissioning of the Darlington and Pickering nuclear generating stations, the management of the portion of OPG's Nuclear Funds attributable to the Prescribed Facilities, and related activities including the inspection and maintenance of the waste storage facilities. Accordingly, accretion expense on the Prescribed Facilities' portion of the Nuclear Funds are reported under this segment.

As the nuclear generating stations operate over time, incremental costs are incurred related to used nuclear fuel and L&ILW which increase the Nuclear Liabilities. These incremental costs are charged to current operations in the Nuclear Generation segment in order to reflect the cost of producing energy. Since the incremental costs increase the Nuclear Liabilities reported in the Nuclear Waste Management segment, an inter-segment charge is recorded between the Nuclear Generation and the Nuclear Waste Management segments. The impact of the inter-segment charge is eliminated on the statements of income and balance sheets of the Prescribed Facilities.

## **Hydroelectric Segment**

The Hydroelectric business segment operates in Ontario, generating and selling electricity from the following regulated hydroelectric facilities operated by OPG: Sir Adam Beck 1, 2 and Pump generating station, DeCew Falls 1 and 2, and the R.H. Saunders hydroelectric facilities, and beginning on January 1, 2014, the Newly Regulated Hydroelectric Facilities. The Hydroelectric business segment also includes ancillary services revenue related to these stations earned through offering available generating capacity as operating reserve and through the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services. These revenues are included by the OEB in determining the regulated prices for the hydroelectric stations of the Prescribed Facilities, which has had the effect of reducing these prices.

Segment (Loss) Income for the Year Ended					
December 31, 2015	Nuclear	Nuclear Waste			
(millions of dollars)	Generation	Management	Hydroelectric	Elimination	Total
Revenue	2,977	64	1,619	(60)	4,600
Fuel expense	242	-	345	-	587
Gross margin	2,735	64	1,274	(60)	4,013
Operations, maintenance and administration	2,195	74	340	(60)	2,549
Depreciation and amortization	613		282	-	895
Accretion on nuclear	-	487	-	-	487
fixed asset removal and nuclear waste management liabilities					
Earnings on nuclear fixed asset removal and nuclear waste management funds	-	(351)	-	-	(351)
Property taxes	13	-	1	-	14
Other loss	3	-	3	-	6
(Loss) income before interest, income taxes, and extraordinary item	(89)	(146)	648	-	413

# Segment Income (Loss) for

December 31, 2014		Nuclear Waste			
(millions of dollars)	Generation	Management	Hydroelectric	Elimination	Total
_					
Revenue	2,761	66	1,417	(61)	4,183
Fuel expense	232	-	343	-	575
Gross margin	2,529	66	1,074	(61)	3,608
Dperations, maintenance and administration	1,983	74	325	(61)	2,321
Depreciation and amortization	483	-	167	-	650
Accretion on nuclear	-	465	-	-	465
fixed asset removal and					
nuclear waste management liabilities					
Earnings on nuclear fixed asset	-	(409)	-	-	(409)
removal and nuclear waste					
management funds					
Regulatory disallowance related	-	-	77	-	77
to the Niagara Tunnel project					
Property taxes	13	-	1	-	14
Other loss	-	-	2	-	2
ncome (loss) before interest,	50	(64)	502	-	488
income taxes, and					
extraordinary item Selected Balance Sheet Informa	ation	Nuclear	Nuclear Wests		
	ation	Nuclear Generation	Nuclear Waste Management	Hydroelectric	Total
extraordinary item Selected Balance Sheet Informa as at December 31, 2015 (millions of dollars)		Generation			
extraordinary item Selected Balance Sheet Informations at December 31, 2015 millions of dollars) Segment property, plant and equi	pment in-service,	Generation		7,413	9,985
extraordinary item Selected Balance Sheet Informa as at December 31, 2015 <i>millions of dollars</i> ) Segment property, plant and equi Segment construction in progress	pment in-service,	Generation			
extraordinary item Selected Balance Sheet Informa is at December 31, 2015 (millions of dollars) Segment property, plant and equi Segment construction in progress Segment property, plant and equi	pment in-service,	Generation           net         2,572           2,289         4,861		7,413 99 7,512	9,985 2,388 12,373
extraordinary item Selected Balance Sheet Informa is at December 31, 2015 (millions of dollars) Segment property, plant and equi Segment property, plant and equi Segment property, plant and equi	pment in-service, pment, net rice, net	Generation net 2,572 2,289		7,413 99 7,512 1	9,985 2,388 12,373 9
extraordinary item Selected Balance Sheet Informa as at December 31, 2015 (millions of dollars) Segment property, plant and equi Segment construction in progress Segment property, plant and equi Segment intangible assets in-serv Segment development in progress	pment in-service, pment, net rice, net	Generation           net         2,572           2,289         4,861		7,413 99 7,512	9,985 2,388 12,373
extraordinary item Selected Balance Sheet Informa as at December 31, 2015	pment in-service, pment, net rice, net	Generation           net         2,572           2,289         4,861           8         -		7,413 99 7,512 1 4	9,985 2,388 12,373 9 4
extraordinary item Selected Balance Sheet Informa as at December 31, 2015 (millions of dollars) Segment property, plant and equi Segment property, plant and equi Segment intangible assets in-serv Segment intangible assets, net Segment fuel inventory	pment in-service, pment, net rice, net	Generation           net         2,572           2,289         4,861           8         -           8         -		7,413 99 7,512 1 4	9,985 2,388 12,373 9 4 13
extraordinary item Selected Balance Sheet Informations as at December 31, 2015 <i>millions of dollars</i> ) Segment property, plant and equitions Segment property, plant and equitions Segment intangible assets in-server Segment intangible assets, net Segment intangible assets, net Segment fuel inventory Segment materials and supplies in	pment in-service, pment, net rice, net	Generation           net         2,572           2,289         4,861           8         -           8         -           8         304		7,413 99 7,512 1 4	9,985 2,388 12,373 9 4 13 304
extraordinary item Selected Balance Sheet Informa as at December 31, 2015 (millions of dollars) Segment property, plant and equi Segment property, plant and equi Segment property, plant and equi Segment intangible assets in-serv Segment development in progress Segment intangible assets, net	pment in-service, pment, net rice, net	Generation           net         2,572           2,289         4,861           8         -           8         -		7,413 99 7,512 1 4	9,985 2,388 12,373 9 4 13
extraordinary item Selected Balance Sheet Informations as at December 31, 2015 <i>millions of dollars</i> ) Segment property, plant and equition Segment property, plant and equition Segment intangible assets in-server Segment intangible assets, net Segment intangible assets, net Segment fuel inventory Segment materials and supplies in Current	pment in-service, pment, net rice, net s	Generation           net         2,572           2,289         4,861           8         -           304         95		7,413 99 7,512 1 4 5 -	9,985 2,388 12,373 9 4 13 304 95

#### Selected Balance Sheet Information

as at December 31, 2014 (millions of dollars)	Nuclear Generation	Nuclear Waste Management		Total
	0.004		7 400	40.407
Segment property, plant and equipment in-service, net	2,924	-	7,483 86	10,407
Segment construction in progress	1,653	-		1,739
Segment property, plant and equipment, net	4,577	-	7,569	12,146
Segment intangible assets in-service, net	11	-	1	12
Segment development in progress	2	-	1	3
Segment intangible assets, net	13	-	2	15
Segment fuel inventory	298	-	-	298
Segment materials and supplies inventory, net:		-		
Current	93	-	-	93
Long-term	332	-	1	333
Nuclear fixed asset removal and nuclear waste management funds (current and non-current portions)	-	7,240	-	7,240
Nuclear fixed asset removal and nuclear waste management liabilities	-	(8,843)	-	(8,843)

Selected Cash Flow Information (millions of dollars)	Nuclear Generation	Nuclear Waste Management	Hydroelectric	Total
Year ended December 31, 2015 Investment in property, plant and equipment, and intangible assets	1,023	-	89	1,112
Year ended December 31, 2014 Investment in property, plant and equipment, and intangible assets	991	-	84	1,075

# 15. RELATED PARTY TRANSACTIONS

Given that the Province owns all of the shares of OPG, related parties of OPG, and therefore the Prescribed Facilities, include the Province and other entities controlled by the Province including Hydro One, the IESO, and the OEFC, and jointly controlled entities. The transactions between OPG and related parties are measured at the exchange amount, which is the amount of consideration established and agreed upon by the related parties.

		2015		2014	
(millions of dollars)	Revenue	Expenses	Revenue	Expenses	
Hydro One					
Electricity sales	12	-	23	-	
Services	1	6	1	12	
Province of Ontario					
Decommissioning Fund excess funding	-	98	-	252	
Used Fuel Fund rate of return guarantee	-	153	-	212	
Gross revenue charges	-	102	-	108	
ONFA guarantee fee	-	8	_	8	
Pension benefits guarantee fee	_	-		2	
r choich benents guarantee ree				2	
DEFC					
Gross revenue charges	-	199	-	201	
Income taxes, net of investment tax credits	-	43	-	78	
ESO					
	4 202		4.077		
Electricity-related revenue	4,392	-	4,077	-	
	4,405	609	4,101	873	

OPG's related party transactions were attributed to the Prescribed Facilities primarily using direct assignment of OPG's respective amounts as applicable, and are summarized below for the years ended December 31:

As at December 31, 2015, the Prescribed Facilities' reported accounts receivable included a specifically identified amount of \$496 million (2014 – \$435 million) of the total OPG amount due from the IESO and \$1 million (2014 – \$1 million) due from Hydro One. The Prescribed Facilities' reported accounts payable and accrued charges as at December 31, 2015 included an estimated amount of \$28 million (2014 – \$52 million) of the total OPG amount due to the OEFC, \$1 million (2014 – \$8 million) due to Hydro One, and \$21 million (2014 – \$3 million) due to the Province.

## 16. RESEARCH AND DEVELOPMENT

For the year ended December 31, 2015, research and development expenses of \$50 million (2014 – \$86 million) were charged to operations in the Prescribed Facilities' financial statements. The amount of expenses attributed to the Prescribed Facilities was primarily determined by direct assignment of OPG's total research and development expenses.

# 17. NET CHANGES IN NON-CASH WORKING CAPITAL BALANCES

(millions of dollars)	2015	2014
Receivables from related parties	(61)	(123)
Other accounts receivable and prepaid expenses	(34)	19
Fuel inventory	(6)	36
Materials and supplies	(2)	1
Accounts payable and accrued charges	(15)	236
Due to Ontario Power Generation Inc.	52	228
Income taxes payable/recoverable	54	11
	(12)	408

Filed: 2016-05-27 EB-2016-0152 Exhibit A2-1-1 Attachment 6 Page 1 of 64



# PRESCRIBED FACILITIES OF ONTARIO POWER GENERATION INC.

# FINANCIAL STATEMENTS

**DECEMBER 31, 2014** 

# Independent auditors' report

# To the management of **Ontario Power Generation Inc.**

We have audited the accompanying financial statements of the **Prescribed Facilities of Ontario Power Generation Inc.**, as defined under *Ontario Regulation 53/05* pursuant to the *Ontario Energy Board Act, 1998* as of December 31, 2014 [the "Prescribed Facilities"], which comprise the balance sheets as at December 31, 2014 and 2013, and the statements of income (loss), comprehensive income (loss), cash flows, and changes in excess of assets over liabilities of the Prescribed Facilities for the years then ended, and a summary of significant accounting policies and other explanatory information. The financial statements have been prepared by management in accordance with United States generally accepted accounting principles, as modified to exclude, as at December 31, 2013, the financial position of the 48 hydroelectric facilities prescribed for rate regulation beginning in 2014 [the "Newly Regulated Hydroelectric Facilities"] and, for the year ended December 31, 2013, the results of operations, cash flows, and changes in excess of assets over liabilities of the Newly Regulated Hydroelectric Facilities.

# Management's responsibility for the financial statements

Management is responsible for the preparation of these financial statements in accordance with United States generally accepted accounting principles, as modified to exclude, as at December 31, 2013, the financial position of the Newly Regulated Hydroelectric Facilities and, for the year ended December 31, 2013, the results of operations, cash flows, and changes in excess of assets over liabilities of the Newly Regulated Hydroelectric Facilities, as described in Note 2 to the financial statements, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

## Auditors' responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform an audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risk of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditors consider internal control relevant to the entity's preparation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained in our audits is sufficient and appropriate to provide a basis for our audit opinion.

#### Opinion

In our opinion, the financial statements of the **Prescribed Facilities of Ontario Power Generation Inc.**, which comprise the balance sheets as at December 31, 2014 and 2013 and the statements of income (loss), comprehensive income (loss), cash flows and changes in excess of assets over liabilities of the Prescribed Facilities for the years then ended, and a summary of significant accounting policies and other explanatory information, are prepared, in all material respects, in accordance with United States generally accepted accounting principles, as modified to exclude, as at December 31, 2013, the financial position of the Newly Regulated Hydroelectric Facilities and, for the year ended December 31, 2013, the results of operations, cash flows, and changes in excess of assets over liabilities of the Newly Regulated Hydroelectric Facilities, as described in Note 2 to the financial statements.

#### Basis of accounting and restriction on use

Without modifying our opinion, we draw attention to Note 2 to these financial statements, which describes the basis of accounting. These financial statements are prepared solely for the use of management of **Ontario Power Generation Inc.** and for filing with the Ontario Energy Board as part of the regulatory process and should not be used for any other purpose.

Our auditors' report is intended solely for the management of **Ontario Power Generation Inc.** and for filing with the Ontario Energy Board as part of the regulatory process and should not be used for any other purpose.

[Original Signed by]

ERNST & YOUNG LLP Chartered Professional Accountants Licensed Public Accountants

Toronto, Canada May 27, 2016

# STATEMENTS OF INCOME (LOSS)

Years Ended December 31		
(millions of dollars)	2014	2013
Revenue (Notes 3 and 14)	4,183	3,494
Fuel expense (Note 14)	4,183	485
Gross margin (Note 14)	3,608	3,009
Expenses (Note 14)		
Operations, maintenance and administration (Note 2)	2,321	2,142
Depreciation and amortization (Note 4)	650	720
Accretion on nuclear fixed asset removal and nuclear waste management liabilities (Note 8)	465	441
Earnings on nuclear fixed asset removal and nuclear waste management funds (Note 8)	(409)	(333)
Regulatory disallowance related to the Niagara Tunnel project (Note 3)	77	-
Property taxes (Note 3)	14	15
	3,118	2,985
Income before other loss (income), interest, income taxes, and extraordinary item	490	24
Other loss (income) (Note 14)	2	(1)
Income before interest, income taxes, and extraordinary item	488	25
Net interest expense (Notes 6 and 7)	203	138
	200	100
Income (loss) before income taxes and extraordinary item	285	(113)
Income tax expense (recovery) (Notes 2 and 9)	27	(38)
Income (loss) before extraordinary item	258	(75)
Extraordinary item (Note 3)	243	-
Net income (loss)	501	(75)

# STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

Years Ended December 31		
(millions of dollars)	2014	2013
Net income (loss)	501	(75)
Other comprehensive income, net of income taxes		
Recognition of initial pension and other post-employment benefits regulatory asset related to facilities prescribed for rate regulation beginning in 2014 ( <i>Note 3</i> ) <sup>1</sup>	184	-
Reclassification to income of amounts related to pension and other post-employment benefits <sup>2</sup>	7	-
Net gain on derivatives designated as cash flow hedges <sup>3</sup>	1	3
Reclassification to income of losses on derivatives designated as cash flow hedges <sup>3</sup>	9	9
Other comprehensive income	201	12
Comprehensive income (loss)	702	(63)

<sup>1</sup> Net of income tax expense of \$61 million and nil for 2014 and 2013, respectively.

<sup>2</sup> Net of income tax expense of \$4 million and nil for 2014 and 2013, respectively.

<sup>3</sup> Net of income tax expense of nil for each of 2014 and 2013.

# **STATEMENTS OF CASH FLOWS**

Years Ended December 31		
(millions of dollars)	2014	2013
Operating activities	501	
Net income (loss) Adjust for non-cash items:	501	(75)
Depreciation and amortization (Note 4)	650	720
Accretion on nuclear fixed asset removal and nuclear waste management	465	441
liabilities (Note 8)		
Earnings on nuclear fixed asset removal and nuclear waste management	(409)	(333)
funds (Note 8)	381	310
Pension and other post-employment benefit costs ( <i>Note 10</i> ) Extraordinary item ( <i>Note 3</i> )	(243)	310
Deferred income taxes and other accrued charges	(62)	(51)
Provision for used nuclear fuel and low and intermediate level waste (Note 8)	33	25
Regulatory assets and liabilities	(46)	(157)
Provision for materials and supplies	37	36
Regulatory disallowance related to the Niagara Tunnel project (Note 3)	77	-
Other	3 1,387	<u> </u>
	1,307	920
Contributions to nuclear fixed asset removal and nuclear waste	(170)	(98)
management funds (Note 8)		. ,
Expenditures on nuclear fixed asset removal and nuclear waste	(109)	(105)
management ( <i>Note 8)</i> Reimbursement of expenditures on nuclear fixed asset removal and	42	45
nuclear waste management (Note 8)	42	40
Contributions to pension funds and expenditures on other post-employment	(424)	(328)
benefits and supplementary pension plans (Note 10)	. ,	. ,
Net changes to other long-term assets and liabilities	(63)	(25)
Net changes to non-cash working capital balances (Note 17)	408	(358)
Cash flow provided by operating activities	1,071	57
Investing activities		
Investment in property, plant and equipment and intangible assets (Note 14)	(1,075)	(747)
Cash flow used in investing activities	(1,075)	(747)
Financing activities	(75)	017
Net (decrease) increase in long-term debt <i>(Note 6)</i> Cash flow (used in) provided by financing activities	(75) (75)	<u>817</u> 817
כמשה חטש נמשבע זוון אוטאעבע שי הומחכוווץ מכנויונופש	(73)	017
Net (decrease) increase in cash and cash equivalents	(79)	127
Cash and cash equivalents at beginning of year contributed by facilities	37	-
prescribed for rate regulation beginning in 2014 (Note 2)		
Cash and cash equivalents, beginning of year	438	311
Cash and cash equivalents, end of year	396	438
כמשו מות כמשו בקעוימובותש, בות טו שבמו	290	400

# **BALANCE SHEETS**

As at December 31		
(millions of dollars)	2014	2013
Assets		
Current assets		
Cash and cash equivalents (Note 2)	396	438
Receivables from related parties (Notes 2 and 15)	436	277
Other accounts receivable and prepaid expenses (Note 2)	62	77
Nuclear fixed asset removal and nuclear waste management funds (Notes 8 and 14)	13	12
Fuel inventory (Notes 2 and 14)	298	334
Materials and supplies (Notes 2 and 14)	93	94
Regulatory assets (Note 5)	167	306
Deferred income taxes (Note 9)	92	121
	1,557	1,659
Property, plant and equipment (Notes 2, 4, and 14)	17,303	13,002
Less: accumulated depreciation	5,157	4,008
	12,146	8,994
Intangible assets (Notes 2, 4, and 14)	123	118
Less: accumulated amortization	108	100
	15	18
Other assets		
Nuclear fixed asset removal and nuclear waste management funds (Notes 8 and 14)	7,227	6,691
Long-term materials and supplies (Notes 2 and 14)	333	322
Regulatory assets (Note 5)	6,507	4,529
Other long-term assets	22	22
~	14,089	11,564
	27,807	22,235

# **BALANCE SHEETS**

As at December 31		
(millions of dollars)	2014	2013
Liabilities		
Current liabilities		
Accounts payable and accrued charges (Note 2)	909	625
Due to Ontario Power Generation Inc. (Notes 2, 5, and 14)	1,489	1,257
Income taxes payable (Notes 2 and 9)	36	25
Regulatory liabilities (Note 5)	5	16
	2,439	1,923
Long-term debt (Note 6)	5,235	3,971
Other liabilities		
Nuclear fixed asset removal and nuclear waste management liabilities (Notes 8 and 14)	8,843	8,430
Pension liabilities (Note 10)	3,254	2,246
Other post-employment benefit liabilities (Note 10)	2,616	2,087
Long-term accounts payable and accrued charges (Note 2)	133	99
Deferred income taxes (Note 9)	880	497
Regulatory liabilities (Note 5)	39	8
	15,765	13,367
France of accordance liebilities		
Excess of assets over liabilities	4 424	2.050
Net capital (Note 2)	4,434	3,050
Accumulated other comprehensive loss (Note 2)	(66)	(76)
	4,368	2,974
	27,807	22,235

Commitments and Contingencies (Notes 9, 10 and 13)

See accompanying notes to the financial statements

On behalf of Ontario Power Generation Inc.

[Original signed by]

Ken Hartwick

Senior Vice President, Finance, Strategy, Risk and Chief Financial Officer

# STATEMENTS OF CHANGES IN EXCESS OF ASSETS OVER LIABILITIES

Years Ended December 31		
(millions of dollars)	2014	2013
Net capital		
Balance at beginning of year	3,050	3,125
Net assets at beginning of year contributed by facilities prescribed for rate regulation in 2014 (Notes 2, 4, 6, 9, and 10)	883	-
	3,933	3,125
Net income (loss)	501	(75)
Balance at end of year	4,434	3,050
Accumulated other comprehensive loss, net of income taxes		
Balance at beginning of year	(76)	(88)
Net assets at beginning of year contributed by facilities prescribed for rate regulation beginning in 2014 <sup>1</sup> ( <i>Notes 2, 9, and 10</i> )	(191)	-
Other comprehensive income	201	12
Balance at end of year	(66)	(76)
	4,368	2,974

<sup>1</sup> Net of income tax assets contributed of \$65 million and nil for 2014 and 2013, respectively.

# NOTES TO THE FINANCIAL STATEMENTS

For the years ended December 31, 2014 and 2013

# 1. DESCRIPTION OF THE BUSINESS

*Ontario Regulation 53/05*, a regulation pursuant to the *Ontario Energy Board Act, 1998*, provides that, effective April 1, 2005, Ontario Power Generation Inc. (OPG) receives regulated prices for electricity generated from Sir Adam Beck 1, 2 and Pump generating station (GS), DeCew Falls 1 and 2, and R.H. Saunders hydroelectric facilities, and Pickering and Darlington nuclear facilities (collectively, the Previously Regulated Facilities). Effective April 1, 2008, the regulated prices for the production from the Previously Regulated Facilities are determined by the Ontario Energy Board (OEB). In November 2013, the Province of Ontario (the Province) amended *Ontario Regulation 53/05* to prescribe for rate regulation by the OEB 48 of OPG's previously unregulated hydroelectric generating facilities (the Newly Regulated Hydroelectric Facilities) beginning in 2014. The amended regulation requires the OEB to establish regulated prices for the production from these facilities. The Previously Regulated Facilities comprised the business prior to January 1, 2014. Both the Previously Regulated Facilities and the Newly Regulated Hydroelectric Facilities) comprise the business starting on January 1, 2014.

The OEB is a self-funding Crown corporation. Its mandate and authority come from the *Ontario Energy Board Act*, *1998*, the *Electricity Act*, *1998*, and a number of other provincial statutes. The OEB is an independent, quasi-judicial tribunal that reports to the Legislature of the Province through the Minister of Energy. It regulates market participants in Ontario's natural gas and electricity industries and carries out its regulatory functions through public hearings and other more informal processes such as consultations.

The Prescribed Facilities have no separate legal status and are a part of OPG. OPG was incorporated on December 1, 1998 pursuant to the *Business Corporations Act* (Ontario) and is wholly owned by the Province. OPG is an Ontario-based electricity generation company whose principal business is the generation and sale of electricity.

# 2. BASIS OF PRESENTATION

These financial statements were prepared in accordance with United States generally accepted accounting principles (US GAAP), as modified to exclude, as at December 31, 2013, the financial position of the Newly Regulated Hydroelectric Facilities and, for the year ended December 31, 2013, the results of the operations, cash flows, and changes in the excess of assets over liabilities of the Newly Regulated Hydroelectric Facilities. These financial statements have been prepared primarily through specific identification of assets, liabilities, accumulated other comprehensive income (AOCI), revenues, expenses, extraordinary items, and other comprehensive income (OCI) of OPG and the Nuclear Waste Management Organization (NWMO) that relate to the Prescribed Facilities. These financial statements include information for the Newly Regulated Hydroelectric Facilities starting on January 1, 2014, as these facilities became rate regulated in that year. The 2013 information contained in the financial statements does not include the results of the Newly Regulated Hydroelectric Facilities. All dollar amounts are presented in Canadian dollars.

OPG's financial statements are prepared in accordance with US GAAP and the rules and regulations of the United States Securities and Exchange Commission for annual financial statements, as required by *Ontario Regulation 395/11*, as amended, a regulation under the *Financial Administration Act* (Ontario).

As OPG primarily maintains pooled bank accounts for the use of all of its operations, OPG's cash balance cannot be assigned specifically to the Prescribed Facilities. OPG's cash balance that could not be specifically assigned was allocated to the Prescribed Facilities based on the cash receipts from the Independent Electricity System Operator

(IESO) in the month of December of the reporting year. The NWMO's cash balance was directly assigned to the Prescribed Facilities.

Accounts receivable from related parties include the receivable balance from the IESO attributable to the Prescribed Facilities. The portion of OPG's receivable balance from the IESO was attributed to the Prescribed Facilities using direct assignment. The majority of the other accounts receivable and prepaid expenses balance reported in the Prescribed Facilities' financial statements represents a direct assignment of OPG's balances based on the nature of the underlying items. Fuel inventory, current and long-term materials and supplies, property, plant and equipment (PP&E), intangible assets and related fuel and depreciation and amortization expenses represent a direct assignment of OPG's respective balances to the Prescribed Facilities. The full balance of OPG's current and non-current regulatory assets and regulatory liabilities representing variance and deferral accounts authorized by the OEB and related amortization expenses are reflected in the Prescribed Facilities' financial statements, as discussed in Note 5.

The liabilities for pension and other post-employment benefits (OPEB) and related costs, regulatory assets and AOCI and OCI balances were determined using a combination of specific identification and allocation to the Prescribed Facilities of the respective amounts in OPG's financial statements, as discussed in Note 10.

The nuclear fixed asset removal and nuclear waste management liabilities (Nuclear Liabilities) that relate to the Prescribed Facilities were determined using a combination of specific identification and allocation of amounts in OPG's financial statements, as discussed in Note 8. The associated accretion expense was computed directly on the balance of the liabilities attributed to the Prescribed Facilities. The nuclear fixed asset removal and nuclear waste management funds, including the current portion, and associated earnings were directly assigned to the Prescribed Facilities, as described in Note 8.

The Prescribed Facilities' short-term debt and long-term debt balances represent amounts owing to OPG. The derivation of debt balances was based on the methodology approved in the OEB's decisions and orders under case numbers EB-2013-0321 and EB-2010-0008, which established regulated prices for the generation from the Prescribed Facilities effective November 1, 2014 and March 1, 2011, respectively (collectively, the OEB Decisions), as discussed in Notes 6 and 7. For the purposes of determining the long-term debt balance, this methodology considers the portion of OPG's project-specific long-term debt incurred to finance the net PP&E and intangible assets of the Prescribed Facilities and an allocation of OPG's non-project-specific long-term debt. This allocation is primarily based on the net PP&E and intangible asset balances of the Prescribed Facilities relative to those of OPG. The Prescribed Facilities' accrued interest payable represents the portion of OPG's accrued interest payable for project-specific and non-project-specific long-term debt attributed to the Prescribed Facilities. The accrued interest payable is included in accounts payable and accrued charges.

The short-term debt was derived based on the methodology approved in the OEB Decisions that considers a portion of OPG's short-term borrowings, if any, including those related to OPG's securitized receivables, attributed to the Prescribed Facilities on the basis of construction and development in progress and non-cash working capital balances of the Prescribed Facilities relative to those of OPG. OPG's project-specific short-term debt is directly assigned on the basis of the assets it was incurred to finance.

The net interest expense on the Prescribed Facilities' short-term and long-term debt was determined using the methodology approved by the OEB Decisions, as discussed in Notes 6 and 7.

Amounts reported as due to Ontario Power Generation Inc. represent the impact of implicit transactions between the Prescribed Facilities and OPG resulting from the methodologies and assumptions underlying the balances of assets, liabilities and AOCI and the amounts of revenues, expenses and OCI reported in these financial statements.

Income taxes payable/recoverable, deferred income tax assets and liabilities and income tax expense (recovery), discussed in Note 9 and the regulatory asset for deferred income taxes discussed in Note 5 were determined as

though the Prescribed Facilities were a separate taxable entity and were calculated based on the financial position and results of operations of the Prescribed Facilities reported in these financial statements.

The majority of the long-term accounts payable and accrued charges balance reported in the Prescribed Facilities' financial statements represents a direct assignment of OPG's balances based on the nature of the underlying items.

The financial impact of OPG's hedging instruments recorded in OPG's AOCI and OCI is attributed to the Prescribed Facilities on the basis of the underlying hedged items and is reflected as components of AOCI and OCI reported in these financial statements.

Net capital of the Prescribed Facilities represents the excess of assets over liabilities, excluding AOCI, as reported in these financial statements. As at January 1, 2014, net capital increased by \$883 million to reflect the net assets contributed by the Newly Regulated Hydroelectric Facilities to the Prescribed Facilities. The Prescribed Facilities' AOCI decreased by \$191 million as at January 1, 2014 to reflect the net assets contributed by the Newly Regulated Hydroelectric Facilities and allocation of specific identification and allocation of the respective assets, liabilities and AOCI as at December 31, 2013 reported in OPG's consolidated financial statements, based on the methods used to derive the corresponding balances of the Previously Regulated Facilities presented in the audited consolidated financial statements of OPG's Prescribed Facilities as at and for the year ended December 31, 2012, and are inclusive of the select assets and liabilities of the Newly Regulated Hydroelectric Facilities identified in the audited Schedule of Select Assets and Liabilities of OPG's Newly Regulated Hydroelectric Facilities as at December 31, 2013 filed by OPG with the OEB under case number EB-2013-0321.

Operations, maintenance and administration (OM&A) expenses primarily consist of expenses specific to the Prescribed Facilities and a portion of OPG's corporate support services and centrally held expenses. OPG's corporate support services and centrally held OM&A expenses were attributed to the Prescribed Facilities consistent with the methodology outlined in independent cost allocation studies submitted to the OEB in OPG's applications under case numbers EB-2013-0321 and EB-2010-0008, the results of which were reflected in the regulated prices established by the OEB in those proceedings. According to this methodology, OPG's corporate support services and centrally-held OM&A expenses were directly assigned to the Prescribed Facilities based on specific identification, where possible. Where specific identification was not possible, expenses were allocated based on cost drivers exhibiting a causal relationship.

Accounts payable and accrued charges associated with OPG's OM&A expenses specific to the Prescribed Facilities were directly assigned to the Prescribed Facilities. Accounts payable and accrued charges associated with OPG's corporate support services and centrally held OM&A expenses were attributed to the Prescribed Facilities on the same basis as the expenses.

The statements of cash flows were prepared using methodologies and assumptions that are consistent with those underlying the balances of assets, liabilities and AOCI and the amounts of revenues, expenses, extraordinary items, and OCI reported in these financial statements. Net assets contributed by the Newly Regulated Hydroelectric Facilities as of January 1, 2014 included cash and cash equivalents of \$37 million.

As a result of the above basis of presentation, the statements of income (loss), statements of comprehensive income (loss), statements of cash flows, balance sheets, and statements of changes in excess of assets over liabilities of the Prescribed Facilities will not be identical to the financial position and results of operations that would have resulted had the Prescribed Facilities historically operated on a standalone basis. These financial statements have been prepared solely for the use of OPG's management and for filing with the OEB, and are considered by management to be a reasonable representation of the financial results of the Prescribed Facilities for the purpose of filing with the OEB. The methodologies and assumptions used to attribute OPG's amounts to the Prescribed Facilities in these financial statements are considered by management to be reasonable and consistent with the above purpose.

The consolidated financial statements of OPG as at and for the year ended December 31, 2014, including the 2013 comparative period, have been prepared in accordance with US GAAP and filed with the Ontario Securities Commission (OSC). OPG's consolidated financial statements as at and for the year ended December 31, 2015, including the 2014 comparative period, have also been prepared in accordance with US GAAP and filed with the OSC.

# 3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

# Consolidation

The financial statements of the Prescribed Facilities include amounts attributable to the Prescribed Facilities in the accounts of OPG and a variable interest entity (VIE), the NWMO, where OPG is the primary beneficiary. All significant intercompany balances and intercompany transactions have been eliminated on consolidation.

# **Variable Interest Entities**

OPG performs ongoing analysis to assess whether it holds any VIEs and consolidates VIEs of which it is deemed to be the primary beneficiary. Amounts attributable to the Prescribed Facilities in the accounts of OPG's VIEs are reflected in the financial statements of the Prescribed Facilities. The primary beneficiary of a VIE has both the power to direct the activities of the entity that most significantly impact its economic performance and the obligation to absorb losses of the entity that could potentially be significant to the entity. In circumstances where OPG is not deemed to be the primary beneficiary, the VIE is not recorded in either OPG or the Prescribed Facilities' financial statements.

In 2002, OPG and other Canadian nuclear waste producers established the NWMO in accordance with the *Nuclear Fuel Waste Act* (NFWA). The primary long-term mandate of the NWMO is to implement an approach to address the long-term management of used nuclear fuel. In addition to the above mandate, the NWMO provides project management services for OPG's proposed Deep Geologic Repository (DGR) project for the long-term management of low and intermediate level waste (L&ILW) and other nuclear lifecycle liability management services. OPG has the majority of voting rights at the NWMO Board of Directors' and members' level. The NFWA requires the nuclear fuel waste owners to establish and make payments into trust funds for the purpose of funding the implementation of the long-term nuclear used fuel management plan. OPG provides over 90 percent of NWMO's funding, primarily towards the design and implementation of Canada's Adaptive Phased Management plan for the long-term management of nuclear used fuel. As a result, OPG is expected to absorb a majority of the NWMO, of which it is the primary beneficiary. Accordingly, the applicable amounts in the accounts of the NWMO, after elimination of all significant intercompany transactions, are consolidated by OPG and therefore the Prescribed Facilities.

#### **Use of Management Estimates**

The preparation of financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses for the reporting periods. Management evaluates these estimates on an ongoing basis based upon historical experience, current conditions, and assumptions believed to be reasonable at the time the assumption is made, with any adjustments recognized in the period incurred. Significant estimates are included in the determination of pension and OPEB balances, asset retirement obligations, income taxes (including deferred income taxes), contingencies, regulatory assets and liabilities, valuation of derivative instruments and investments in segregated funds, depreciation and amortization expenses, and inventories. Actual results may differ significantly from these estimates. The preparation of the financial statements of the Prescribed Facilities also includes significant estimates in determining the allocation of OPG's balances to the Prescribed Facilities.

#### **Cash and Cash Equivalents and Short-Term Investments**

Cash and cash equivalents include an allocated portion of OPG's cash on deposit and money market securities with a maturity of less than 90 days on the date of purchase. All other money market securities with a maturity on the date of purchase that is greater than 90 days, but less than one year, are recorded as short-term investments and classified as current assets. These securities are valued at the lower of cost and market.

#### Inventories

Inventories, consisting of fuel and materials and supplies, are measured at the lower of cost and market. Cost is determined as weighted average cost for fuel inventory and average cost for materials and supplies.

#### PP&E, Intangible Assets and Depreciation and Amortization

PP&E and intangible assets are recorded at cost. Interest costs incurred during construction and development are capitalized as part of the cost of the asset based on the interest rates on OPG's long-term debt. Expenditures for replacements of major components are capitalized.

Depreciation and amortization rates for the various classes of assets are based on their estimated service lives. Any asset removal costs that have not been specifically provided for in current or previous periods are charged to OM&A expenses when incurred. Repairs and maintenance costs are also expensed when incurred.

PP&E are depreciated on a straight-line basis except for computers and transport and work equipment, which are mostly depreciated on a declining balance basis. Intangible assets, which consist of major application software, are amortized on a straight-line basis.

As at December 31, 2014, the depreciation and amortization periods of PP&E and intangible assets were as follows:

Nuclear generating stations and major components	15 to 58 years <sup>1</sup>
Hydroelectric generating stations and major components	10 to 100 years
Administration and service facilities	10 to 50 years
Computers, and transport and work equipment assets – declining balance	9% to 40% per year
Major application software	5 years
Major application software	5 years
Service equipment	5 to 10 years

<sup>1</sup> As at December 31, 2014, the end of station life for depreciation purposes for the Darlington and Pickering nuclear generating stations ranged between 2020 and 2051. Major components are depreciated over the lesser of the station life and the life of the components.

#### **Asset Impairment**

Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The review is based on the presence of impairment indicators such as the future economic benefit of the assets and external market conditions. The net carrying amount of assets is considered impaired if it exceeds the sum of the estimated undiscounted cash flows expected to result from the asset's use and eventual disposition. In cases where the sum of the undiscounted expected future cash flows is less than the carrying amount, an impairment loss is recognized. This loss equals the amount by which the carrying amount exceeds the fair value. Fair value is determined using expected discounted cash flows when quoted market prices are not available. The impairment is recognized in income in the period in which it is identified.

#### **Rate Regulated Accounting**

US GAAP recognizes that rate regulation can create economic benefits and obligations that are required by the regulator to be obtained from, or settled with, the customers. When OPG assesses that there is sufficient assurance that incurred costs in respect of the Prescribed Facilities will be recovered in the future, those costs are deferred and reported as a regulatory asset in the consolidated financial statements of OPG and, as applicable, the Prescribed

Facilities. When OPG is required to refund amounts to customers in the future in respect of the Prescribed Facilities, including amounts related to costs that have not been incurred and for which the OEB has provided recovery through regulated prices, a regulatory liability is recorded.

Certain of the regulatory assets and liabilities recognized in the Prescribed Facilities' financial statements relate to variance and deferral accounts authorized by the OEB, including those authorized pursuant to *Ontario Regulation 53/05*. These accounts typically capture differences between actual costs and revenues and the corresponding forecast amounts approved by the OEB in setting regulated prices, or record the impact of items not reflected in the approved regulated prices. The measurement of these regulatory assets and liabilities is subject to certain estimates and assumptions, including assumptions made in the interpretation of *Ontario Regulation 53/05* and the OEB's decisions are reviewed as part of the OEB's regulatory process.

Regulatory assets and liabilities for variance and deferral account balances approved by the OEB for inclusion in regulated prices are amortized based on approved recovery or repayment periods. Disallowed balances are charged to operations in the period that the OEB's decision is issued.

Regulatory assets and liabilities for variance and deferral account balances approved by the OEB are classified as current if they are expected to be recovered from, or refunded to, customers within 12 months of the end of the reporting period, based on recovery or repayment periods authorized by the OEB. All other regulatory asset and liability balances are classified as non-current on the balance sheets.

In addition to regulatory assets and liabilities for variance and deferral accounts, OPG recognizes regulatory assets and liabilities for unamortized amounts recorded in AOCI in respect of pension and OPEB obligations, and deferred income taxes, in order to reflect the expected recovery or repayment of amounts attributed to the Prescribed Facilities through future regulated prices charged to customers. There are measurement uncertainties related to these balances due to the assumptions made in the determination of pension and OPEB obligations and deferred income taxes attributed to the Prescribed Facilities.

The regulatory asset for unamortized pension and OPEB amounts recorded in AOCI has reflected the OEB's use, since April 1, 2008, of the accrual basis of accounting for including pension and OPEB amounts in approved regulated prices for OPG. This is also the manner in which these costs are recognized in the financial statements of OPG and the Prescribed Facilities. Therefore, unamortized amounts in respect of OPG's pension and OPEB plans that are recognized in AOCI generally have not been reflected in the regulated prices until they are reclassified from AOCI and recognized as amortization components of the benefit costs for these plans. The regulatory asset is reversed as underlying unamortized balances are amortized as components of the benefit cost.

In setting OPG's regulated prices effective November 1, 2014 under case number EB-2013-0321, the OEB limited amounts for pension and OPEB costs allowed in the approved revenue requirements to the regulated business portion of OPG's cash expenditures on its pension and OPEB plans for the Prescribed Facilities. It is OPG's position that this decision by the OEB does not constitute a change in the basis of recovery for OPG's pension and OPEB costs. This position is based on the OEB's establishment of the Pension & OPEB Cash Versus Accrual Differential Deferral Account pursuant to its November 2014 decision, as discussed below, and the expectation expressed by the OEB in that decision that a transition from the accrual basis of recovery for OPG, if required, would be addressed in a future OPG rate proceeding, informed by the outcome of a future generic OEB proceeding related to the regulatory treatment and recovery of pension and OPEB costs. Accordingly, OPG continues to believe that there is sufficient likelihood that unamortized pension and OPEB amounts that have not yet been reclassified from AOCI will be included in future regulated prices or an OEB-authorized deferral or variance account as they are recognized in benefit costs. Therefore, OPG has continued to recognize a regulatory asset for these unamortized amounts, and also has recognized a regulatory asset for the balance of the Pension & OPEB Cash Versus Accrual Differential Deferral Account, which records the difference between OPG's actual pension and OPEB costs for the regulated business determined on an accrual basis and OPG's corresponding actual expenditures for these plans. In May

2015, under case number EB-2015-0040, the OEB began a consultation process to develop standard principles to guide its future review of pension and OPEB costs of rate regulated utilities in the electricity and natural gas sectors, including establishing appropriate regulatory mechanisms for cost recovery. OPG is participating in the consultation process, which is ongoing.

If, in a future proceeding, the OEB decides that the recovery basis for OPG's pension and OPEB amounts for OPG's Prescribed Facilities should be changed, OPG may be required to adjust the regulatory assets for unamortized pension and OPEB amounts recorded in AOCI and for the Pension & OPEB Cash Versus Accrual Differential Deferral Account.

See Notes 5, 6, 7, 9, 10 and 18 to these financial statements for additional disclosures related to the OEB's decisions, regulatory assets and liabilities, and rate regulated accounting.

#### Nuclear Fixed Asset Removal and Nuclear Waste Management Liabilities

The Prescribed Facilities' financial statements recognize asset retirement obligations for nuclear fixed asset removal and nuclear waste management, discounted for the time value of money. OPG estimates both the amount and timing of future cash expenditures based on the plans for nuclear fixed asset removal and nuclear waste management. The liabilities are initially recorded at their estimated fair value, which is based on a discounted value of the expected costs to be paid.

On an ongoing basis, the Nuclear Liabilities are increased by the present value of the incremental (variable) cost portion for the nuclear waste generated each year, with the corresponding amounts charged to operating expenses. Variable expenses relating to low and intermediate level nuclear waste are charged to OM&A expenses. Variable expenses relating to the management and storage of nuclear used fuel are charged to fuel expense. The liabilities may also be adjusted due to any changes in the estimated amount or timing of the underlying future cash flows, with any resulting changes in the related asset retirement costs capitalized as part of the carrying amount of the related fixed assets. A comprehensive reassessment of all underlying assumptions and baseline cost estimates for the Nuclear Liabilities is performed periodically. Changes in the Nuclear Liabilities resulting from changes in assumptions or estimates that impact the amount or timing of the originally estimated undiscounted cash flows are recorded as an adjustment to the liabilities. Any resulting changes in the related asset retirement of the related asset retirement costs are capitalized as part of the carrying amount of nuclear fixed assets. Upon settlement of the liabilities, a gain or loss would be recorded.

Accretion arises because the Nuclear Liabilities are reported on a net present value basis. Accretion expense is the increase in the carrying amount of the liabilities due to the passage of time.

The asset retirement cost is capitalized by increasing the carrying value of the related fixed assets. The capitalized cost is depreciated over the remaining service life of the related fixed assets and is included in depreciation and amortization expenses.

OPG has no legal obligation associated with the decommissioning of its hydroelectric generating facilities, and the costs cannot be reasonably estimated because of the long service life of these assets. With either maintenance efforts or rebuilding, the water control structures are assumed to be used for the foreseeable future. Accordingly, neither OPG's nor the Prescribed Facilities' financial statements recognize a liability for the decommissioning of hydroelectric generating facilities.

#### Nuclear Fixed Asset Removal and Nuclear Waste Management Funds

Pursuant to the Ontario Nuclear Funds Agreement (ONFA) between OPG and the Province, OPG established a Used Fuel Segregated Fund (Used Fuel Fund) and a Decommissioning Segregated Fund (Decommissioning Fund) (together the Nuclear Funds). The Used Fuel Fund is intended to fund expenditures associated with the long-term management of radioactive used nuclear fuel bundles, while the Decommissioning Fund was established to fund the future costs of nuclear fixed asset removal, long-term L&ILW management, and certain costs for used fuel storage

incurred after the nuclear stations are shut down. OPG maintains the Nuclear Funds in third-party custodial and trust accounts that are segregated from the rest of OPG's assets. The segregated funds include amounts associated with the nuclear stations of the Prescribed Facilities. Separate segregated funds are not maintained for the Prescribed Facilities.

The investments in the Nuclear Funds and the corresponding amounts payable to/receivable from the Province are classified as held-for-trading. The Nuclear Funds are measured at fair value based on the bid prices of the underlying equity and fixed income securities, and in the case of the alternative investment portfolio, using appropriate valuation techniques as outlined in Note 12 to these financial statements, with realized and unrealized gains and losses recognized in the statements of income (loss).

#### **Revenue Recognition**

All of OPG's electricity generation is offered into the real-time energy spot market administered by the IESO. Revenue is recognized as electricity is generated and metered to the IESO and is directly assigned to the Prescribed Facilities on the basis of the underlying generation of the nuclear and regulated hydroelectric facilities.

Energy revenue generated from the Prescribed Facilities is based on regulated prices determined by the OEB that have to date included a base regulated price and rate riders for the recovery or repayment of approved variance and deferral account balances. The following are the OEB-authorized regulated prices for electricity generated from the Prescribed Facilities in effect during the years ended December 31:

	20	2014		
\$/megawatt hour (MWh)	Effective November 1	Prior to November 1		
Nuclear Generation				
Base regulated price	59.29	51.52	51.52	
Rate rider	4.18	4.18	6.27	
	63.47	55.70	57.79	
Hydroelectric Generation Hydroelectric generating stations prescribed for rate regulation prior to 2014 Base regulated price Rate rider	40.20 2.02	35.78 2.02	35.78 3.04	
	42.22	37.80	38.82	
Newly Regulated Hydroelectric Facilities				
Base regulated price	41.93	n/a	n/a	

The base regulated prices in effect during 2014 and 2013 were determined by the OEB using a two-year forecast cost of service methodology based on revenue requirements, taking into account a forecast of production and operating costs for the regulated facilities and a return on rate base. Rate base is a regulatory construct that, for OPG, represents the average net level of investment in regulated fixed and intangible assets in service and an allowance for working capital.

The base regulated prices for the Previously Regulated Facilities in effect prior to November 1, 2014 were established by the OEB's order issued in April 2011 under case number EB-2010-0008, with an effective date of March 1, 2011. The base regulated prices for the Previously Regulated Facilities effective November 1, 2014 were established by the OEB's order issued in December 2014 on OPG's application for new regulated prices under case number EB-2013-0321. In that proceeding, effective November 1, 2014, the OEB also established regulated prices for the Newly Regulated Hydroelectric Facilities that were prescribed for rate regulation beginning in 2014. Prior to November 1, 2014, the revenue for the electricity generation from the Newly Regulated Hydroelectric Facilities was based on the Ontario electricity spot market price and is reported as such in these financial statements.

Rate riders for OPG have been established to recover or repay approved balances in OEB-authorized regulatory variance and deferral accounts. The rate riders in effect during 2013 and 2014 reflected the terms of a settlement agreement between OPG and intervenors, which provided for the recovery or repayment of most OEB-authorized regulatory variance and deferral account balances as at December 31, 2012. The settlement agreement was approved by the OEB in March 2013 under case number EB-2012-0002. OPG's variance and deferral accounts are discussed in Note 5 to these financial statements.

Revenues from the regulated hydroelectric facilities are subject to the OEB-approved hydroelectric incentive mechanism. The mechanism provides a pricing incentive to OPG to shift hydroelectric production from lower market price periods to higher market price periods, reducing the overall costs to ratepayers.

The Prescribed Facilities' revenue also includes revenue from heavy water sales, detritiation services, isotope sales, and ancillary services. Revenues from these activities are recognized as services are provided, or as products are delivered, and are directly assigned to the Prescribed Facilities based on their underlying nature.

#### **Derivatives**

All derivatives attributed to the Prescribed Facilities, including embedded derivatives that must be separately accounted for, generally are classified as held-for-trading and recorded at fair value in the balance sheets. Transaction costs are expensed as incurred for financial instruments classified or designated as held-for-trading.

Derivatives qualify for hedge accounting if they meet stringent documentation requirements, and if the derivative instrument that is designated as a hedge is expected to effectively hedge the identified risk throughout the life of the hedged item. At the inception of a hedging relationship, OPG documents the relationship between the hedging instrument and the hedged item, its risk management objective, and its strategy for undertaking the hedge. A documented assessment is made, both at the inception of a hedge and on an ongoing basis, of whether or not the derivatives that are used in hedging transactions are highly effective in offsetting the changes attributable to the hedged risks in the fair values or cash flows of the hedged items.

#### **Fair Value Measurements**

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly arm's-length transaction between market participants at the measurement date. Fair value measurements are required to reflect the assumptions that market participants would use in pricing an asset or liability based on the best available information. These assumptions include the risks inherent in a particular valuation technique, such as a pricing model, and the risks inherent in the inputs to the model. OPG uses a fair value hierarchy, grouping assets and liabilities into three levels based on the relative objectivity of the inputs used to measure fair value, with Level 1 representing the most objective. Refer to Note 12 for a discussion of fair value measurements and the fair value hierarchy.

#### **Research and Development**

Research and development costs are expensed as incurred. Research and development costs incurred to discharge long-term obligations, such as the Nuclear Liabilities, for which specific provisions have already been made are charged to the related liability.

#### Leases

Leases are evaluated and classified as either operating or capital leases for financial reporting purposes. Capital leases, which transfer substantially all of the risks and benefits incidental to ownership of the leased item, are capitalized at the inception of the lease at the fair value of the leased property or, if lower, at the present value of the minimum lease payments. Capital leases are depreciated over the shorter of the estimated useful life of the asset and the lease term.

Leases where the lessor retains substantially all the risks and benefits incidental to ownership of the asset are classified as operating leases. Operating lease payments, other than contingent rentals, are recognized as an expense in the statements of income on a straight-line basis over the lease term. Where the amount of rent expense recognized is different from the actual operating lease payment, other than contingent rentals, the difference is deferred and included as assets or liabilities on the balance sheets.

# Pension and Other Post-Employment Benefits

OPG's post-employment benefit programs consist of a contributory defined benefit registered pension plan, a defined benefit supplementary pension plan, other post-retirement benefits (OPRB) including group life insurance and health care benefits, and long-term disability (LTD) benefits. Post-employment benefit programs are also provided by the NWMO, which is consolidated into OPG's and the Prescribed Facilities' financial results. Unless otherwise noted, information on OPG's post-employment benefit programs is presented on a consolidated basis. OPG does not maintain separate pension and OPEB plans for the employees and pensioners associated with the Prescribed Facilities.

OPG accrues its obligations under pension and OPEB plans in accordance with US GAAP. The obligations for pension and OPRB are determined using the projected benefit method pro-rated on service. The obligation for LTD benefits is determined using the projected benefit method on a terminal basis. Pension and OPEB obligations are impacted by factors including interest rates, adjustments arising from plan amendments, demographic assumptions, experience gains or losses, salary levels, inflation, and health care cost escalation assumptions. Pension and OPEB costs and obligations are determined annually by independent actuaries using management's best estimate assumptions.

Assumptions are significant inputs to actuarial models that measure pension and OPEB obligations and related effects on operations. Discount rate, inflation, and changes in salary levels are three critical assumptions in the determination of benefit costs and obligations. In addition, the expected return on plan assets is a critical assumption in the determination of registered pension plan costs. These assumptions, as well as other assumptions involving demographic factors such as retirement age, mortality, and employee turnover, are evaluated periodically by management in consultation with independent actuaries. During the evaluation process, the assumptions are updated to reflect past experience and expectations for the future. Actual results in any given year will often differ from actuarial assumptions because of economic and other factors. In accordance with US GAAP, for pension and OPRB, the impact of these updates and differences on the respective benefit obligations is accumulated and amortized over future periods; for LTD benefits, the impact of these updates and differences is immediately recognized as OPEB costs in the period incurred.

Discount rates, which are representative of AA corporate bond yields, are used to calculate the present value of the expected future cash flows on the measurement date to determine the projected benefit obligations for OPG's employee benefit plans. A lower discount rate increases the benefit obligations and increases benefit costs. The expected rate of return on plan assets is based on the pension fund's asset allocation, as well as the expected return considering long-term historical risks and returns associated with each asset class within the plan portfolio. A lower expected rate of return on plan assets increases pension cost.

Pension fund assets include equity securities, corporate and government debt securities, pooled funds, real estate, infrastructure, and other investments. These assets are managed by professional investment managers. The pension fund does not invest in equity or debt securities issued by OPG. Pension fund assets are valued using market-related values for purposes of determining the amortization of actuarial gains or losses and the expected return on plan assets. The market-related value recognizes gains and losses on equity assets relative to a six percent assumed real return over a five-year period.

Pension and OPEB costs include current service costs, interest costs on the obligations, the expected return on pension plan assets, adjustments for plan amendments and adjustments for actuarial gains or losses, which result

from changes in assumptions and experience gains and losses. Past service costs or credits arising from pension and OPRB plan amendments are amortized on a straight-line basis over the expected average remaining service life to full eligibility of the employees covered by the corresponding plan. Past service costs or credits arising from amendments to LTD benefits are immediately recognized as OPEB costs in the period incurred. Due to the long-term nature of pension and OPRB liabilities, the excess of the net cumulative unamortized gain or loss, over 10 percent of the greater of the benefit obligation and the market-related value of the plan assets (the corridor), is amortized over the expected average remaining service life of the employees, which represents the period during which the associated economic benefits are expected to be realized by OPG. Actuarial gains or losses for LTD benefits are immediately recognized as OPEB costs in the period incurred.

OPG recognizes the funded status of the defined benefit plans on their balance sheets. The funded status is measured as the difference between the fair value of plan assets and the benefit obligation on a plan-by-plan basis.

Actuarial gains or losses and past service costs or credits that arise during the year and are not recognized immediately as components of benefit costs are recognized as increases or decreases in OCI, net of income taxes. The unamortized amounts in AOCI are subsequently reclassified and recognized as components of pension and OPRB costs as described above.

OPG and therefore the Prescribed Facilities record an offsetting regulatory asset or liability for the portion of pension and OPRB-related adjustments to AOCI attributable to the Prescribed Facilities, in order to reflect the expected recovery or refund of these amounts through future regulated prices charged to customers. For the recoverable or refundable portion attributable to the Prescribed Facilities, a corresponding change is recorded in this regulatory asset or liability for the amount of the increases or decreases in OCI and for the amounts reclassified from AOCI into benefit costs during the period.

When the recognition of the transfer of employees and employee-related benefits gives rise to both a curtailment and a settlement, the curtailment is accounted for prior to the settlement. A curtailment is the loss by employees of the right to earn future benefits under the plan. A settlement is the discharge of a plan's liability.

#### Taxes

OPG is exempt from income tax under the *Income Tax Act* (Canada). However, under the *Electricity Act, 1998*, OPG is required to make payments in lieu of corporate income taxes to the Ontario Electricity Financial Corporation (OEFC). These payments are calculated in accordance with the *Income Tax Act* (Canada) and the *Taxation Act, 2007* (Ontario), as modified by the *Electricity Act, 1998* and related regulations. This results in OPG effectively paying taxes similar to what would be imposed under the federal and Ontario tax acts. OPG's payments in lieu of corporate income taxes are made on an aggregate basis for all of its operations. Income taxes payable/recoverable, deferred income tax assets, deferred income tax liabilities and income tax expense (recovery) reflected in these financial statements are calculated as though the Prescribed Facilities were a standalone taxable entity.

OPG and therefore the Prescribed Facilities follow the liability method of accounting for income taxes. Under the liability method, deferred income tax assets and liabilities are determined based on differences between the accounting and tax bases of assets and liabilities. Deferred amounts are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. The effect of a change in tax rates on deferred income tax assets and liabilities is included in income in the period the change is enacted.

If it is determined that it is more likely than not that some, or all, of a deferred income tax asset will not be realized, a valuation allowance is recorded to report the balance at the amount expected to be realized.

OPG and therefore the Prescribed Facilities record regulatory assets or liabilities for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers.

Tax benefits associated with income tax positions taken, or expected to be taken, in a tax return and investment tax credits are recorded only when the more likely than not recognition threshold is satisfied. Tax benefits and investment tax credits recognized are measured at the largest amount of benefit that is greater than 50 percent likely of being realized upon settlement.

Investment tax credits are recorded as a reduction to income tax expense and are primarily attributed to the Prescribed Facilities on the basis of the underlying expenditures giving rise to the credits. Interest and penalties associated with unrecognized tax benefits are classified as income tax expense.

OPG makes payments in lieu of property tax on certain of its generating assets to the OEFC, and also pays property taxes to municipalities. These payments are determined on an individual facility basis, and those pertaining to the Prescribed Facilities are reflected in these financial statements.

OPG pays charges on gross revenue derived from the annual generation of electricity from its hydroelectric generating assets. The gross revenue charge (GRC) includes a fixed percentage charge applied to the annual hydroelectric generation derived from stations located on provincial Crown lands, in addition to graduated rate charges applicable to all hydroelectric stations. The GRC costs and the associated assets and liabilities reflected in these financial statements represent amounts directly attributed to the generation derived from the regulated hydroelectric stations. GRC costs are reported in fuel expense. GRC prepayments or liabilities are included in other accounts receivable and prepaid expenses or accounts payable and accrued charges, respectively.

#### **Changes in Accounting Policies and Estimates**

# Impacts of Regulation of the Newly Regulated Hydroelectric Facilities, and the OEB's 2014 Decision and Order

The OEB's decision on OPG's September 2013 application for new regulated prices for the generation from the Previously Regulated Facilities was issued in November 2014, following a public hearing process. This decision was followed by the OEB's order in December 2014 establishing new regulated prices for these facilities effective November 1, 2014. The OEB's decision and order also established a regulated price for the generation from the Newly Regulated Hydroelectric Facilities effective November 1, 2014.

As a result of the Newly Regulated Hydroelectric Facilities becoming prescribed for rate regulation effective July 1, 2014 by *Ontario Regulation 53/05* as amended, regulatory assets related to deferred income taxes and unamortized amounts recorded in AOCI in respect of pension and OPEB obligations were recognized in OPG's and the Prescribed Facilities' financial statements. The recognition of the regulatory asset related to deferred income taxes for the Newly Regulated Hydroelectric Facilities resulted in an extraordinary gain of \$243 million in the statements of income (loss) for 2014. The recognition of regulatory assets related to pension and OPEB obligations for the Newly Regulated Hydroelectric Facilities resulted in an increase of \$184 million in OCI, net of \$61 million in income taxes, in 2014.

The OEB's 2014 decision and order also approved a \$1,365 million addition to regulated rate base due to the completion and placement in service of the Niagara Tunnel project in March 2013. The approved rate base amount was lower than the cost of the asset, which resulted in a write-off of costs of \$77 million in 2014. In January 2016, the OEB issued its decision on OPG's December 2014 motion asking the OEB to review and vary parts of its November 2014 decision, including the disallowed Niagara Tunnel expenditures. In its January 2016 decision, the OEB reversed a portion of the original disallowance of the Niagara Tunnel expenditures. As a result, OPG recorded a gain of \$22 million in the first quarter of 2016 to recognize the expected future recovery from customers of the portion of the disallowance reversed by the OEB's motion decision.

#### **Investment Companies**

For reporting periods beginning January 1, 2014, OPG adopted the updates to Accounting Standards Codification (ASC) Topic 946, *Investment Companies* (ASC Topic 946). Based on the amended scope of the standard, with

respect to the Prescribed Facilities, OPG concluded that the Decommissioning Fund, the Used Fuel Fund and the Ontario NFWA Trust (NFWA Trust) should be treated as investment entities for accounting purposes. As the investments of these entities are already recorded at fair value, there were no measurement differences upon adoption of this update. Additional disclosures required under ASC Topic 946 are provided in Note 8 to these financial statements.

# Recent Accounting Pronouncements

# Revenue from Contracts with Customers

In May 2014, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update No. 2014-09, *Revenue from Contracts with Customers* (ASU 2014-09), which supersedes nearly all existing revenue recognition guidance, including industry-specific guidance under US GAAP. The core principle of ASU 2014-09 is to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration to which an entity expects to be entitled for those goods or services. ASU 2014-09 defines a five step process to achieve this core principle and, in doing so, more judgment and estimates may be required, compared to the requirements under existing US GAAP.

In July 2015, the FASB approved the deferral of the effective date of the new revenue standard for public entities reporting under US GAAP from 2017 to 2018. As such, the standard is expected to be applicable for OPG's 2018 fiscal year, including interim periods in 2018. In applying the standard, entities would have the option between two retrospective transition methods: (i) a full retrospective approach reflecting the application of the standard in each prior reporting period with the option to elect certain practical expedients, or (ii) a modified retrospective approach with the cumulative effect of initially adopting ASU 2014-09 recognized at the date of adoption and additional disclosures. OPG is assessing the impact of this new standard on its consolidated financial statements and the financial statements of the Prescribed Facilities and has not yet determined the method by which it will adopt the standard in 2018.

# Balance Sheet Classification of Deferred Income Taxes

In November 2015, the FASB issued Accounting Standards Update No. 2015-17, *Income Taxes (Topic 740): Balance Sheet Classification of Deferred Taxes* (ASU 2015-17), which requires entities to present deferred income tax assets and deferred income tax liabilities as non-current in a classified balance sheet. ASU 2015-17 simplifies the existing guidance, which requires entities to separately present deferred income tax assets and deferred income tax liabilities as current and non-current in a classified balance sheet. As permitted by the standard, OPG and therefore the Prescribed Facilities early adopted the updates to ASU 2015-17 for the fiscal year ended December 31, 2015 on a retrospective basis. Other than through the change in the balance sheet presentation of deferred income tax assets and deferred income tax liabilities, the amended standard does not impact OPG's or the Prescribed Facilities' financial statements.

#### Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share

In May 2015, the FASB issued Accounting Standards Update No. 2015-07, *Fair Value Measurement (Topic 820) – Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share (or its Equivalent).* Under the new guidance, investments measured at net asset value, as a practical expedient for fair value, are excluded from the fair value hierarchy. Removing investments measured using the practical expedient from the fair value hierarchy is intended to eliminate the diversity in practice that currently exists with respect to the categorization of these investments. The only criterion for categorizing investments in the fair value hierarchy will be the observability of the inputs. The amendments will be effective for OPG's 2016 fiscal year, including interim periods. As the amendments pertain to disclosures, the adoption of the updated standard will not result in adjustments to balances reported in OPG's or the Prescribed Facilities' financial statements.

#### Lease Accounting

In February 2016, the FASB issued the accounting update for ASC Topic 840, *Leases*. The update includes comprehensive changes to existing guidance for lease accounting, particularly for lessees. The standard is expected to be effective for OPG's 2019 fiscal year, including interim periods. Early adoption is permitted. OPG is assessing the impact of the new standard on OPG's and the Prescribed Facilities' financial statements.

# 4. PP&E, INTANGIBLE ASSETS AND DEPRECIATION AND AMORTIZATION

Depreciation and amortization expenses for the years ended December 31 consist of the following:

(millions of dollars)	2014	2013
Depreciation	419	344
Amortization of intangible assets	6	7
Amortization of regulatory assets and liabilities (Note 5)	290	436
Amounts recognized in regulatory variance and deferral accounts	(65)	(67)
	650	720
PP&E as at December 31 consists of the following:		
(millions of dollars)	2014	2013
Nuclear generating stations	6,277	6,079
Nuclear generating stations Hydroelectric generating stations <sup>1</sup>		
Nuclear generating stations Hydroelectric generating stations <sup>1</sup>	6,277 9,287	6,079 6,033
Nuclear generating stations Hydroelectric generating stations <sup>1</sup> Construction in progress	6,277 9,287 1,739	6,079 6,033 890
Nuclear generating stations Hydroelectric generating stations <sup>1</sup> Construction in progress Less: accumulated depreciation	6,277 9,287 1,739 17,303	6,079 6,033 890 13,002
Nuclear generating stations Hydroelectric generating stations <sup>1</sup> Construction in progress Less: accumulated depreciation Nuclear generating stations	6,277 9,287 1,739 17,303 3,353	6,079 6,033 890 13,002 3,074
Nuclear generating stations Hydroelectric generating stations <sup>1</sup> Construction in progress Less: accumulated depreciation	6,277 9,287 1,739 17,303 3,353 1,804	6,079 6,033 890 13,002 3,074 934
Nuclear generating stations Hydroelectric generating stations <sup>1</sup> Construction in progress Less: accumulated depreciation Nuclear generating stations	6,277 9,287 1,739 17,303 3,353	6,079 6,033 890 13,002 3,074

Construction in progress as at December 31 consists of the following:

(millions of dollars)	2014	2013
Darlington Refurbishment Other	1,309 430	658 232
	1,739	890

Interest capitalized to construction and development in progress at an average rate of five percent during 2014 (2013 – five percent) was \$60 million (2013 – \$51 million).

Intangible assets as at December 31 consist of the following:

(millions of dollars)	2014	2013
Nuclear generating stations	116	114
Hydroelectric generating stations <sup>1</sup>	4	2
Development in progress	3	2
	123	118
Less: accumulated amortization		
Nuclear generating stations	105	99
Hydroelectric generating stations <sup>1</sup>	3	1
	108	100
	15	18

<sup>1</sup> Amounts for the Newly Regulated Hydroelectric Facilities are included beginning on January 1, 2014.

The estimated aggregate amortization expense for each of the five succeeding years for the in-service intangible assets recognized as at December 31, 2014 is as follows:

(millions of dollars)	2015	2016	2017	2018	2019
Amortization expense	5	4	2	-	-

The net assets contributed by the Newly Regulated Hydroelectric Facilities as at January 1, 2014 included \$2,525 million in net PP&E and \$57 million in construction in progress, which were wholly reflected as increases in the Prescribed Facilities' net capital as at January 1, 2014.

# 5. REGULATORY ASSETS AND LIABILITIES

In March 2013, under case number EB-2012-0002, the OEB approved a settlement agreement between OPG and intervenors on all aspects of OPG's application requesting approval to recover or repay balances in most of the authorized variance and deferral accounts as at December 31, 2012 (the Settlement Agreement). This resulted in approval of \$1,234 million recorded in the authorized variance and deferral accounts as at December 31, 2012, deferral for future review of \$34 million recorded in certain accounts as at December 31, 2012, and a write-off of \$7 million of interest recorded in certain accounts as at December 31, 2012.

In approving the Settlement Agreement, the OEB authorized the disposition of approved balances over periods ranging from two to 12 years beginning on January 1, 2013. In April 2013, the OEB issued an order authorizing OPG to collect \$633 million over the period from January 1, 2013 to December 31, 2014 through rate riders effective during that period. During 2014 and 2013, the regulatory assets and liabilities for the variance and deferral account balances approved for disposition were amortized on a straight-line basis based on recovery or repayment periods, effective January 1, 2013, authorized by the OEB's approval of the Settlement Agreement. Any shortfall or over-recovery of approved balances due to differences between actual and forecast production was recorded in the authorized Nuclear Deferral and Variance Over/Under Recovery Variance Account and Hydroelectric Deferral and Variance Over/Under Recovery Variance Account to be collected from, or refunded to, customers in the future.

The OEB's March 2013 decision and April 2013 order also authorized the continuation of previously existing variance and deferral accounts, including those authorized pursuant to *Ontario Regulation 53/05*. During the period from January 1, 2013 to October 31, 2014, regulatory assets and liabilities were recognized for additions recorded in these variance and deferral accounts as authorized by the OEB, relative to the applicable forecast amounts reflected in the cost of service regulated prices then in effect.

In November 2014 and December 2014, respectively, the OEB issued its decision and order establishing new regulated prices for OPG's regulated generation effective November 1, 2014 under case number EB-2013-0321. The OEB's decision and order approved the net recovery of the balances in four variance accounts as at December 31, 2013 totaling \$189 million, without adjustments. The net recovery was approved for the following accounts: the Hydroelectric Incentive Mechanism Variance Account, the Hydroelectric Surplus Baseload Generation Variance Account, the nuclear capital and hydroelectric portions of the Capacity Refurbishment Variance Account, and the Nuclear Development Variance Account. The OEB authorized the net recovery of the balances in these accounts over a 12-month period, through rate riders effective from January 1, 2015 to December 31, 2015.

In its November 2014 decision and December 2014 order, the OEB also approved the continuation of previously authorized variance and deferral accounts and, effective November 1, 2014, extended all applicable accounts to the Newly Regulated Hydroelectric Facilities. During the period from November 1, 2014 to December 31, 2014, regulatory assets and liabilities were recognized for additions recorded in these variance and deferral accounts as authorized by the OEB. Additions to the Pension & OPEB Cash Versus Accrual Differential Deferral Account and the Pension & OPEB Cash Payment Variance Account, which were newly established by the OEB effective November 1, 2014 for all of OPG's regulated facilities, were also recognized as regulatory assets during this period.

During 2014 and 2013, interest was recorded on the balances of the variance and deferral accounts as authorized by the OEB. For accounts subject to interest during this period, interest was recorded using the OEB-prescribed interest rate of 1.47 percent per annum.

In December 2014, under case number EB-2014-0370, OPG filed an application with the OEB requesting approval to recover approximately \$1.8 billion, representing the December 31, 2014 balances in most of the authorized regulatory variance and deferral accounts, through new rate riders beginning on July 1, 2015. The OEB's decisions and order on the application were issued in 2015 and are discussed in Note 18.

The regulatory assets and liabilities recorded as at December 31 are as follows:

(millions of dollars)	2014	2013
Regulatory assets		
Variance and deferral accounts authorized by the OEB		
Pension and OPEB Cost Variance Account	939	667
Bruce Lease Net Revenues Variance Account	315	353
Nuclear Liability Deferral Account	286	254
Capacity Refurbishment Variance Account	190	100
Hydroelectric Surplus Baseload Generation Variance Account	67	19
Nuclear Development Variance Account	59	57
Other variance and deferral accounts	111	233
	1,967	1,683
Pension and OPEB Regulatory Asset (Note 10)	4,363	3,158
Deferred Income Taxes (Note 9)	344	(6)
	•	(0)
Total regulatory assets	6,674	4,835
Less: current portion	167	306
Non-current regulatory assets	6,507	4,529
Regulatory liabilities		
Variance and deferral accounts authorized by the OEB		
Other variance and deferral accounts	44	24
		21
Total regulatory liabilities	44	24
Less: current portion	5	16
· · · · · · · · · · · · · · · ·		
Non-current regulatory liabilities	39	8

The changes in the regulatory assets and liabilities during 2014 and 2013 are as follows:

(millions of dollars)	Pension and OPEB Cost Variance	Bruce Lease Net Revenues Variance	Nuclear Liability Deferral	Capacity Refurbish -ment Variance	Hydro- electric Surplus Baseload Generation Variance	Nuclear Develop- ment Variance	Other Variance and Deferral (net)	Pension and OPEB Regula- tory Asset	Deferred Income Taxes
Net regulatory assets January 1, 2013	324	311	208	14	4	30	384	4,494	105
Increase (decrease)	402	110	123	93	15	26	53	(1,336)	(111)
Interest	1	(5)	(2)	-	-	1	3	-	-
Amortization	(60)	(63)	(75)	(7)	-	-	(231)	-	-
Net regulatory assets (liabilities) December 31, 2013	667	353	254	100	19	57	209	3,158	(6)
Increase	312	4	82	92	48	1	9	1,205	350
Interest	-	-	-	3	-	1	2	-	-
Amortization	(40)	(42)	(50)	(5)	-	-	(153)	-	-
Net regulatory assets December 31, 2014	939	315	286	190	67	59	67	4,363	344

### **Pension and OPEB Cost Variance Account**

As authorized by the OEB, for the period from March 1, 2011 to October 31, 2014, the Pension and OPEB Cost Variance Account recorded the difference between actual pension and OPEB costs for the Previously Regulated Facilities determined on an accrual basis and related tax impacts, and the corresponding forecast amounts reflected in the regulated prices then in effect. In its November 2014 decision, the OEB determined that the pension and OPEB amounts reflected in the new regulated prices effective November 1, 2014 would be limited to OPG's estimated minimum contributions to its registered pension plan attributed to the Prescribed Facilities and a forecast of OPG's expenditures on its OPEB and supplementary pension plans attributed to the Prescribed Facilities. As such, the OEB ordered the Pension and OPEB Cost Variance Account to record only amortization beginning on November 1, 2014.

In its March 2013 decision approving the Settlement Agreement and April 2013 order, the OEB authorized the recovery of 2/12 of the balance in the Pension and OPEB Cost Variance Account as at December 31, 2012 over a 24-month period ended December 31, 2014. The OEB also authorized the recovery of 10/12 of the account balance as at December 31, 2012 over a 144-month period ending December 31, 2024.

#### **Bruce Lease Net Revenues Variance Account**

In accordance with *Ontario Regulation 53/05*, the OEB is required to include the difference between OPG's revenues and costs associated with its ownership of the two nuclear stations on lease to Bruce Power L.P. (Bruce Power) in the determination of the regulated prices for production from OPG's regulated nuclear facilities. The OEB established a variance account that captures differences between OPG's revenues and costs related to the nuclear generating station on lease to Bruce Power and the corresponding forecasts included in approved nuclear regulated prices.

OPG's revenues associated with the nuclear stations on lease to Bruce Power included changes in the fair value of the derivative embedded in the Bruce Power lease agreement (Bruce Lease), which was recognized as a liability in OPG's consolidated financial statements. The derivative arose from the conditional reduction of lease revenue to OPG in the future, embedded in the terms of the agreement, in each calendar year where the annual arithmetic average of the Hourly Ontario Electricity Price fell below \$30/MWh and certain other conditions were met. The term of the derivative embedded in the Bruce Lease was based on the remaining estimated service lives, for OPG's accounting purposes, for certain units of the Bruce nuclear generating stations. Effective December 4, 2015, the Bruce Lease was amended to remove the provision that provided for conditional reductions to OPG's revenue under the lease. Following the amendments to the Bruce Lease, OPG reversed the embedded derivative liability of \$299 million in December 2015, with an offsetting reduction in the regulatory asset for the Bruce Lease Net Revenues Variance Account.

Variances between OPG's revenues and costs related to the Bruce nuclear generating stations and the corresponding forecasts included in the nuclear regulated prices are recognized by the Prescribed Facilities as increases or decreases to the regulatory asset for the Bruce Lease Net Revenues Variance Account. The changes in this regulatory asset are not recognized in the statements of income (loss) of the Prescribed Facilities and are charged to OPG through the due to/from account with OPG. OPG reports the impact of these variances in its consolidated statements of income as part of the revenues and expenses to which they relate.

In 2013, the OEB ordered the portion of the balance in the Bruce Lease Net Revenues Variance Account as at December 31, 2012 related to the impact of the derivative liability embedded in the Bruce Lease to be recovered on the basis of OPG's expected rent rebate payments to Bruce Power and associated income tax impacts.

The non-derivative portion of the account balance as at December 31, 2012 was authorized by the OEB to be recovered over a 48-month period ending December 31, 2016. Effective January 1, 2013, the Prescribed Facilities recorded amortization of the regulatory asset for the non-derivative portion of the account on a straight-line basis over this period.

#### **Nuclear Liability Deferral Account**

In accordance with *Ontario Regulation* 53/05, the OEB has authorized the Nuclear Liability Deferral Account (NLDA) in connection with changes to OPG's liabilities for nuclear used fuel management and nuclear decommissioning and L&ILW management associated with the nuclear facilities owned and operated by OPG, which are comprised of the Pickering and Darlington nuclear generating stations. The deferral account records the revenue requirement impact associated with the changes in these liabilities arising from an approved reference plan, in accordance with the terms of the ONFA. During 2012, the Province approved the 2012 ONFA Reference Plan covering the period from 2012 to 2016, with an effective date of January 1, 2012. As the regulated prices in effect prior to November 1, 2014 did not reflect the impact of the 2012 ONFA Reference Plan, the Prescribed Facilities recorded the impact as an increase to the regulatory asset for the NLDA during the period from January 1, 2012 to October 31, 2014.

Components of the increase in the regulatory asset for the NLDA relating to the above increase in liabilities, with reductions to applicable expenses reported in these financial statements for the years ended December 31, 2014 and 2013 are summarized as follows:

(millions of dollars)	2014	2013
Fuel expense	23	26
Fuel expense Low and intermediate level waste management variable expenses <sup>1</sup>	23	20
Depreciation expense	43	52
Return on rate base <sup>2</sup>	-	2
Interest <sup>3</sup>	-	(2)
Income taxes	15	42
	82	121

<sup>1</sup> Amount was recorded as a reduction to OM&A expenses.

<sup>2</sup> Amount was recorded as a reduction to accretion on nuclear fixed asset removal and nuclear waste management liabilities.

<sup>3</sup> Amount in 2013 represents the write-off of interest recorded on the balance of the account as of December 31, 2012, pursuant to the OEB-approved Settlement Agreement.

In its March 2013 decision and April 2013 order, the OEB approved the recovery of a portion of the balance in the NLDA as at December 31, 2012 over a 24-month period ended December 31, 2014. As ordered by the OEB per the terms of the Settlement Agreement, effective January 1, 2013, no interest is recorded on the balance of this account.

#### **Capacity Refurbishment Variance Account**

Pursuant to *Ontario Regulation 53/05*, the OEB has authorized the Capacity Refurbishment Variance Account (CRVA). The account captures variances from forecasts reflected in the regulated prices for capital and non-capital costs incurred to increase the output of, refurbish, or add operating capacity to OPG's regulated facilities. The balance in the account as at December 31, 2014 includes variances related to the Niagara Tunnel project, the refurbishment of the Darlington nuclear generating station, life extension initiatives at the Pickering nuclear generation station, and other projects.

OPG determines amounts to be recovered from, or refunded to, customers with respect to variances in capital costs as the difference from forecast depreciation expense and cost of capital associated with the in-service capital reflected in the regulated prices and associated income tax effects. The cost of capital amount in the account is calculated using the weighted average cost of capital, including a return on equity, as approved by the OEB in determining the regulated prices. In accordance with US GAAP, in recognizing a regulatory asset for the CRVA, OPG and therefore the Prescribed Facilities limit the portion of cost of capital additions recognized as a regulatory asset to the amount calculated using the average rate of capitalized interest applied to construction and development in progress.

As the regulated prices in effect prior to November 1, 2014 did not reflect the impact of the Niagara Tunnel declared in-service in March 2013, the CRVA additions for the period from January 1, 2014 to October 31, 2014 included

\$116 million (year ended December 31, 2013 – \$114 million) to be recovered from customers related to the Niagara Tunnel. This amount included \$83 million (2013 – \$83 million) for the capital cost component determined using the weighted average cost of capital. The Prescribed Facilities recognized an increase of \$89 million in the regulatory asset for the CRVA related to the Niagara Tunnel in 2014 (2013 – \$88 million), of which \$56 million (2013 – \$56 million) represented the capital cost component determined using the average rate of five percent for capitalized interest applied to construction and development in progress for the year ended December 31, 2014 (2013 – five percent).

In its March 2013 decision and April 2013 order, the OEB approved the recovery of the nuclear non-capital cost portion of \$12 million of the account balance as at December 31, 2012 over a 24-month period ended December 31, 2014. In setting new regulated prices effective November 1, 2014, the OEB approved the recovery of the December 31, 2013 nuclear capital and hydroelectric portions of the account balance, totaling \$119 million, over a 12-month period beginning on January 1, 2015.

# Hydroelectric Surplus Baseload Generation Variance Account

The Hydroelectric Surplus Baseload Generation Variance Account records the impact of foregone production at OPG's regulated hydroelectric facilities due to surplus baseload generation conditions. The OEB authorized the variance account effective March 1, 2011 for the hydroelectric generating stations prescribed for rate regulation prior to 2014 and extended it to the applicable newly regulated hydroelectric facilities effective November 1, 2014.

In its November 2014 decision and December 2014 order, the OEB approved the recovery of the account balance as at December 31, 2013 over a 12-month period beginning on January 1, 2015.

# **Nuclear Development Variance Account**

The Nuclear Development Variance Account was established pursuant to *Ontario Regulation 53/05* and records differences between actual non-capital costs incurred by OPG in the course of planning and preparing for the development of proposed new nuclear facilities, and the forecast amount of these costs included in the nuclear regulated prices. These costs are reported in the financial statements of the Prescribed Facilities.

In its November 2014 decision, the OEB approved the recovery of the account balance as at December 31, 2013 over a 12-month period beginning on January 1, 2015.

# **Other Variance and Deferral Accounts**

As at December 31, 2014 and 2013, regulatory assets for other variance and deferral accounts included amounts for the Nuclear Deferral and Variance Over/Under Recovery Variance Account and the Hydroelectric Deferral and Variance Over/Under Recovery Variance Account.

As at December 31, 2014, regulatory assets for other variance and deferral accounts also included amounts for the Pension & OPEB Cash Versus Accrual Differential Deferral Account, the Pickering Life Extension Depreciation Variance Account, and the Pension & OPEB Cash Payment Variance Account. The Pickering Life Extension Depreciation Variance Account balance was recorded wholly during the period from November 1, 2014 to December 31, 2014. This balance represents an offset to the ratepayer credit for the reduction in depreciation expense for the Pickering nuclear generating station that was reflected both as a reduction to the new base regulated prices effective November 1, 2014 and the nuclear rate rider in effect to the end of 2014. The Pension & OPEB Cash Payment Variance Account records, effective November 1, 2014, the difference between OPG's actual contributions to its registered pension plan and expenditures on its OPEB and supplementary pension plans attributed to the Prescribed Facilities, and the corresponding forecast amounts reflected in the regulated prices. As at December 31, 2013, regulatory assets for other variance and deferral accounts also included the Tax Loss Variance Account and the Impact for USGAAP Deferral Account, the OEB-approved balances of which were fully amortized by December 31, 2014.

Regulatory liabilities for other variance and deferral accounts as at December 31, 2014 and 2013 included amounts for the Income and Other Taxes Variance Account and the Hydroelectric Incentive Mechanism Variance Account. The Income and Other Taxes Variance Account includes deviations in income taxes for the Prescribed Facilities from those approved by the OEB in setting regulated prices that are caused by changes in tax rates and rules, as well as reassessments. The Hydroelectric Incentive Mechanism Variance Account records a credit to customers equal to 50 percent of OPG's hydroelectric incentive mechanism net revenues for the regulated hydroelectric facilities, including the Newly Regulated Hydroelectric Facilities effective November 1, 2014, above a specified threshold.

The regulatory liabilities for other variance and deferral accounts as at December 31, 2014 and the regulatory assets for other variance and deferral accounts as at December 31, 2013 also included amounts for the Ancillary Services Net Revenue Variance Account and the Hydroelectric Water Conditions Variance Account. The Ancillary Services Net Revenue Variance Account was authorized by the OEB to capture differences between actual nuclear and regulated hydroelectric ancillary services net revenue and the forecast amounts of such revenue approved by the OEB in setting regulated prices. The Hydroelectric Water Conditions Variance Account captures the impact of differences in regulated hydroelectric electricity production due to differences between forecast water conditions underlying the production forecast approved by the OEB in setting regulated hydroelectric prices, and the actual water conditions. Both of these accounts apply to the Newly Regulated Hydroelectric Facilities effective November 1, 2014.

In its March 2013 decision and April 2013 order, the OEB approved the recovery or repayment of the majority of the balances in the other variance and deferral accounts as at December 31, 2012 over a 24-month period ended December 31, 2014.

# Pension & OPEB Cash Versus Accrual Differential Deferral Account

The OEB established the Pension & OPEB Cash Versus Accrual Differential Deferral Account in its November 2014 decision. The deferral account records, effective November 1, 2014, the difference between OPG's actual pension and OPEB costs for the Prescribed Facilities determined on an accrual basis, and OPG's corresponding actual cash expenditures for these plans. The OEB established the deferral account in conjunction with determining that the pension and OPEB amounts reflected in the regulated prices effective November 1, 2014 would be limited to a forecast of OPG's cash expenditures on its pension and OPEB plans, rather than costs determined on an accrual basis in accordance with US GAAP. In making this determination, the OEB indicated that a generic proceeding on the regulatory treatment and recovery of pension and OPEB costs would be beneficial and that the appropriate disposition of the deferral account balance will be determined in the future based on the outcome of that proceeding. The OEB's consultation process to develop standard principles to guide its review of pension and OPEB costs of rate regulated utilities in the electricity and natural gas sectors, including establishing appropriate regulatory mechanisms for cost recovery, began in May 2015 and is ongoing.

During the year ended December 31, 2014, the Prescribed Facilities recognized a regulatory asset of \$36 million for the addition to the Pension & OPEB Cash Versus Accrual Differential Deferral Account. As directed by the OEB, no interest is recorded on the balance of this account.

#### Pension and OPEB Regulatory Asset

The Pension and OPEB Regulatory Asset represents unamortized amounts in respect of OPG's pension and OPEB plans that have been recognized in OCI, have not yet reclassified into the amortization component of the benefit costs in respect of these plans and are expected to be recovered from customers through future regulated prices for the Prescribed Facilities. The regulatory asset is reversed as underlying unamortized balances are amortized into components of benefit costs. Refer to Note 3 for a detailed discussion of pension and OPEB cost recovery methodology under the heading *Rate Regulated Accounting*. The AOCI amounts related to pension and OPEB plans are presented in Note 10.

#### **Deferred Income Taxes**

OPG and therefore the Prescribed Facilities are required to recognize deferred income taxes, including deferred income taxes on temporary differences related to the regulatory assets and liabilities recognized for accounting purposes. In addition, OPG and therefore the Prescribed Facilities are required to recognize a separate regulatory asset or liability for the amount of deferred income taxes expected to be included in future regulated prices and recovered from, or paid to, customers. Income taxes are discussed in Note 9.

# 6. LONG-TERM DEBT AND NET INTEREST EXPENSE

The Prescribed Facilities' long-term debt is due to OPG and is derived based on the methodology approved in the OEB Decisions. This debt is reflected as long-term debt in these financial statements because the methodology approved in the OEB Decisions takes into account OPG's long-term debt. The methodology establishes the total amount of debt based on a deemed capital structure for the Prescribed Facilities, which was set by the OEB at 55 percent debt and 45 percent equity effective November 1, 2014 following the inclusion of the Newly Regulated Hydroelectric Facilities. For the period from January 1, 2013 to October 31, 2014, the OEB-approved deemed capital structure, which included only the Previously Regulated Facilities, was 53 percent debt and 47 percent equity.

The long-term debt portion of the total debt established using the deemed capital structure includes project-specific long-term debt incurred by OPG to finance the PP&E and intangible assets of the Prescribed Facilities and an allocation of OPG's non-project-specific long-term debt. The allocation of the non-project-specific long-term debt is primarily based on the net PP&E balances, excluding those financed by project-specific debt, of the Prescribed Facilities relative to those of OPG. The Prescribed Facilities' asset balances used in this calculation include the Newly Regulated Hydroelectric Facilities beginning in 2014. The Other component of the Prescribed Facilities' long-term debt is derived as the difference between total debt per the deemed capital structure and the sum of the Prescribed Facilities' short-term debt and the portion of OPG's actual long-term debt attributed to the Prescribed Facilities.

The following table summarizes the components of the long-term debt of the Prescribed Facilities as at December 31:

(millions of dollars)	2014	2013
OPG's project-specific debt for the Prescribed Facilities Allocated portion of OPG's non-project-specific debt Other	1,065 2,117 2,053	1,065 1,457 1,449
Total long-term debt	5,235	3,971

The net assets contributed by the Newly Regulated Hydroelectric Facilities as at January 1, 2014 included \$1,339 million in long-term debt derived using the methodology described above and wholly reflected as a decrease in the Prescribed Facilities' net capital as at January 1, 2014. This included an allocation of \$621 million of the total non-project-specific debt reflected in OPG's consolidated financial statements as at December 31, 2013.

OPG's project-specific long-term debt included in the derivation of the Prescribed Facilities' long-term debt as at December 31, 2014 consists of outstanding debt financing of \$1,065 million for the Niagara Tunnel project provided by the OEFC (December 31, 2013 – \$1,065 million). This debt was issued by OPG against a Niagara Tunnel project credit facility with the OEFC, which expired on December 31, 2014. Interest payable by OPG was fixed for each note issued against the facility at the time of advance at a rate equal to the prevailing Benchmark Government of Canada 10-Year Bond, plus a credit spread determined by the OEFC based on a survey of market rates.

As at December 31, 2014, OPG's total non-project-specific long-term debt consisted of senior and subordinated notes payable to the OEFC totaling \$2,460 million (2013 – \$2,460 million). Approximately 86 percent of this amount

was allocated to the Prescribed Facilities as at December 31, 2014 (2013 – 59 percent) based on the methodology per the OEB Decisions. The increase in the portion of OPG's non-project-specific long-term debt attributed to the Prescribed Facilities in 2014 over 2013 reflects the inclusion of the Newly Regulated Hydroelectric Facilities beginning in 2014.

OPG maintained a \$500 million general corporate credit facility with the OEFC, which expired on December 31, 2014 with no amounts outstanding. In December 2014, OPG entered into an agreement with the OEFC for an \$800 million general corporate credit facility which expires on December 31, 2016, in support of financing requirements for the 2015–2016 period. As at December 31, 2014, there were no amounts outstanding under this facility.

The net interest expense on the Prescribed Facilities' long-term debt for the years ended December 31, 2014 and 2013 at effective rates of 5.01 and 5.09 percent per annum, respectively, was calculated pursuant to the methodology approved by the OEB Decisions. The calculation of the effective rates reflects the actual interest cost of the weighted average amount of applicable OPG debt issues outstanding during the year that are attributed to the Prescribed Facilities, taking into account the impact of related effective interest rate hedging instruments entered into by OPG.

The following table summarizes the net interest expense on the Prescribed Facilities' long-term debt for the years ended December 31:

(millions of dollars)	2014	2013
OPG's project-specific debt for the Prescribed Facilities	60	59
Allocated portion of OPG's non-project-specific debt	100	69
Other	100	64
Amounts recorded in regulatory variance and deferral accounts	(61)	(57)
Net interest expense on long-term debt	199	135

# 7. SHORT-TERM DEBT AND NET INTEREST EXPENSE

The Prescribed Facilities' short-term debt is due to OPG and is derived based on the methodology approved in the OEB Decisions that considers the following:

- a portion of OPG's short-term borrowings, if any, excluding project-specific short-term debt directly assigned on the basis of the assets it is incurred to finance; and
- a portion of securitized borrowings, if any, allocated to the Prescribed Facilities on the basis of construction and development in progress, fuel inventory, and materials and supplies balances attributed to the Prescribed Facilities relative to those of OPG.

Based on this methodology, none of OPG's short-term borrowings were included in the derivation of the Prescribed Facilities' short-term debt as at December 31, 2014 and 2013.

OPG has an agreement to sell an undivided co-ownership interest in its current and future accounts receivable to an independent trust. OPG also retains an undivided co-ownership interest in the receivables sold to the trust and, under the agreement, continues to service the receivables. The transfer provides the trust with ownership of a share of the payments generated by the receivables, computed on a monthly basis. The trust's recourse to OPG is generally limited to its income earned on the receivables. In September 2014, the maximum amount of co-ownership interest that can be sold under this agreement was reduced to \$150 million and the expiry date was extended from November 30, 2014 to November 30, 2016. As at December 31, 2014 and 2013, with the exception of \$150 million in Letters of Credit in 2014 (2013 – \$80 million), there were no amounts outstanding under this agreement and, therefore, none were reflected in the Prescribed Facilities' short-term debt.

OPG maintains a \$1 billion revolving committed bank credit facility, which is divided into two \$500 million multi-year term tranches. As at December 31, 2014 and 2013, there were no outstanding borrowings under this facility. In the second quarter of 2016, OPG renewed and extended both tranches of the credit facility to May 2021.

The net interest expense on the Prescribed Facilities' short-term debt for the year ended December 31, 2014 was calculated pursuant to the methodology established by the OEB Decisions at an effective rate of 1.20 percent per annum (2013 – 1.17 percent) plus the portion of the cost of maintaining OPG's commercial bank credit facility attributed to the Prescribed Facilities. The calculation of the effective rate is based on the cost of funds associated with OPG's securitized receivables during the year, excluding Letters of Credit, and the interest cost of the weighted average amount of OPG's commercial paper outstanding during the year, as allocated to the Prescribed Facilities.

The following table summarizes the net interest expense on the Prescribed Facilities' short-term debt for the years ended December 31:

(millions of dollars)	2014	2013
Bank credit facility cost	4	3
Net interest expense on short-term debt	4	3

#### 8. NUCLEAR FIXED ASSET REMOVAL AND NUCLEAR WASTE MANAGEMENT LIABILITIES AND FUNDS

The portion of OPG's liabilities for nuclear fixed asset removal and nuclear waste management on a present value basis attributed to the Prescribed Facilities consists of the following as at December 31:

(millions of dollars)	2014	2013
Liability for nuclear used fuel management Liability for nuclear decommissioning and L&ILW management	5,317 3,526	5,056 3,374
Nuclear fixed asset removal and nuclear waste management liabilities	8,843	8,430

The changes in the portion of OPG's Nuclear Liabilities attributed to the Prescribed Facilities for the years ended December 31 are as follows:

(millions of dollars)	2014	2013
Liabilities, beginning of year	8,430	8,040
Increase in liabilities due to accretion <sup>1</sup>	465	443
Increase in liabilities due to nuclear used fuel and waste management variable expenses and other expenses <sup>1</sup>	57	52
Liabilities settled by expenditures on nuclear fixed asset removal and nuclear waste management	(109)	(105)
Liabilities, end of year	8.843	8.430

<sup>1</sup> Excludes the impact of regulatory variance and deferral accounts.

OPG's Nuclear Liabilities are comprised of expected costs to be incurred up to and beyond termination of operations and the closure of its nuclear plant facilities. Costs will be incurred for activities such as preparation for safe storage, dismantling, demolition and disposal of facilities and equipment, remediation and restoration of sites, and the ongoing and long-term management of nuclear used fuel and L&ILW material.

The determination of the accrual for nuclear fixed asset removal and nuclear waste management costs requires significant assumptions since these programs are long-term in nature. The most recent comprehensive update of the

cost estimates for the nuclear decommissioning and nuclear waste management liabilities is contained in the approved 2012 ONFA Reference Plan. The next ONFA Reference Plan is expected to be completed in 2016 and will cover the 2017–2021 period.

For the purposes of calculating OPG's Nuclear Liabilities as at December 31, 2014 and therefore the portion of these liabilities attributed to the Prescribed Facilities, consistent with the accounting end-of-life assumptions, nuclear station decommissioning was projected to occur over approximately the next 40 years. The estimates for the Nuclear Liabilities as at December 31, 2014 include cash flow estimates for decommissioning the nuclear stations for approximately 40 years after stations are shut down and to 2071 for placement of used fuel into the long-term disposal repository followed by extended monitoring.

The significant assumptions underlying operational, technical, and economic factors used in the calculation of the accrued Nuclear Liabilities are subject to periodic review. Changes to these assumptions, including changes to assumptions on the timing of the nuclear waste programs including construction of waste disposal facilities, station end-of-life dates, waste disposal methods, financial indicators, or the technology employed, may result in significant changes to the value of the accrued liabilities. With programs of this duration and the evolving technology to handle the nuclear waste, there is a significant degree of uncertainty surrounding the measurement of the costs for these long-term programs. These costs may increase or decrease over time.

The costs that are recognized as a liability by OPG and the method of attributing these costs for the purposes of determining the liabilities of the Prescribed Facilities are as follows:

- The present value of the costs of decommissioning the nuclear generating facilities after the end of their useful lives, with the costs determined primarily on an individual facility basis and directly assigned to the nuclear stations of the Prescribed Facilities;
- The present value of the fixed cost portion of nuclear waste management programs that are required based on the total volume of waste expected to be generated over the assumed life of the stations, with the costs attributed to the Prescribed Facilities either on the basis of direct assignment or total expected waste volumes over the assumed lives of all of OPG's nuclear stations, depending on the nature of the waste management program; and
- The present value of the variable cost portion of nuclear waste management programs taking into account
  waste volumes generated to-date by each of OPG's nuclear generating stations, with the underlying variable
  cost rates calculated using either the total waste volumes expected to be generated over the assumed life of
  each of the nuclear generating stations of the Prescribed Facilities or the total waste volumes expected to be
  generated over the assumed lives of all of OPG's nuclear stations, depending on the nature of the program.

Changes in the portion of OPG's Nuclear Liabilities attributed to the Prescribed Facilities during the years ended December 31, 2014 and 2013 were determined as follows:

- Accretion was computed directly on the balance of the liabilities attributed to the Prescribed Facilities using the discount rates applicable to OPG's total liabilities;
- Nuclear used fuel and nuclear waste management variable expenses were computed using applicable
  waste management program cost rates applied to waste volumes generated by each of the nuclear stations
  of the Prescribed Facilities; and
- With the exception of expenditures incurred in relation to the safe storage of Pickering Units 2 and 3 and the
  preparation for future safe storage of the remaining Pickering units, which were directly assigned to the
  Prescribed Facilities, expenditures on nuclear fixed asset removal and nuclear waste management were
  primarily allocated to the Prescribed Facilities in proportions reflecting expected waste volumes for each of
  the nuclear stations over their assumed lives.

Effective December 31, 2015, OPG revised its accounting assumptions for the estimated useful lives of its nuclear generating stations, including the stations on lease to Bruce Power. To reflect the above changes, OPG recognized

a total increase of \$2,330 million in the Nuclear Liabilities, and a corresponding decrease in the related asset retirement costs capitalized to PP&E, effective December 31, 2015. These changes included a decrease in the Nuclear Liabilities of \$417 million relating to the Darlington and Pickering nuclear generating stations and a corresponding decrease in the related asset retirement costs capitalized to PP&E. The changes associated with the Pickering GS and the Darlington GS were recognized in the Prescribed Facilities' financial statements as at December 31, 2015. The nuclear ARO associated with the regulated nuclear facilities was impacted by the changes to the Bruce station service lives because the costs of OPG's fleet-wide waste management programs are shared by all of OPG's nuclear stations based on used nuclear fuel and waste volumes. The total increase of \$2,330 million in the Nuclear Liabilities was determined by discounting the net incremental cash flows at 3.21 per cent.

In December 2015, as required by the OEB's previous decisions and orders, OPG applied to the OEB, under case number EB-2015-0374, for an accounting order establishing a new deferral account to record, effective January 1, 2016, the revenue requirement impact on the prescribed nuclear facilities of changes to the Nuclear Liabilities and depreciation expense arising from the changes in the nuclear station end-of-life dates effective December 31, 2015. In March 2016, the OEB issued its final decision and order establishing the requested account effective January 1, 2016. The new deferral account is expected to largely offset the total decrease in depreciation expense and accretion expense for the Prescribed Facilities in 2016 arising from the above changes in station end-of-life assumptions and Nuclear Liabilities.

#### Liability for Nuclear Used Fuel Management Costs

The liability for nuclear used fuel management represents the cost of managing the highly radioactive used nuclear fuel bundles. The federal NFWA, proclaimed into force in 2002, required that Canada's nuclear fuel waste owners form a nuclear waste management organization, and that each waste owner establish a trust fund for used fuel management costs. This organization, the NWMO, is responsible for the design and implementation of Canada's plan for the long-term management of nuclear used fuel waste. To estimate its liability for nuclear used fuel management costs as at December 31, 2014, OPG has adopted a conservative approach consistent with the Adaptive Phased Management concept approved by the Government of Canada, which assumes a DGR as part of the long-term management of nuclear used fuel, with an in-service date of 2035 at the earliest.

#### Liability for Nuclear Decommissioning and L&ILW Management Costs

The liability for nuclear decommissioning and L&ILW management represents the estimated costs of decommissioning the nuclear generating stations after the end of their service lives, as well as the cost of managing L&ILW generated by the stations. The significant assumptions used in estimating future nuclear fixed asset removal costs include a deferred dismantlement basis for decommissioning of the stations, whereby the reactors will remain in a safe state condition for a 30-year period prior to an approximate 10-year dismantlement period.

The life cycle costs of L&ILW management include the costs of processing and storage of such radioactive wastes during and following the operation of the nuclear stations, as well as the costs of the ultimate long-term management of these wastes. The current assumptions used to establish the accrued costs for the management of L&ILW include an L&ILW DGR. Agreement was previously reached with local municipalities for OPG to develop a DGR for the long-term management of L&ILW adjacent to OPG's Western Waste Management Facility. OPG has suspended design activities for the proposed L&ILW DGR pending receipt of the site preparation and construction licence.

#### **Ontario Nuclear Funds Agreement**

In accordance with the ONFA, OPG sets aside and invests funds that are held in segregated custodian and trustee accounts specifically for discharging its obligation for nuclear decommissioning and long-term nuclear waste management. The Decommissioning Fund was established to fund the future costs of nuclear fixed asset removal, long-term L&ILW management, and certain costs for used fuel storage incurred after the stations are shut down. The

Used Fuel Fund was established to fund future costs of long-term nuclear used fuel waste management. OPG makes contributions to the Nuclear Funds based on the approved ONFA Reference Plan in effect.

The balances and earnings of OPG's Decommissioning Fund and Used Fuel Fund were attributed to the Prescribed Facilities primarily using direct assignment on the basis of the station-level opening balances of, and specified station-level contributions to the respective funds prescribed by the approved ONFA Reference Plan in effect. Disbursements from the funds were allocated on the basis of the cost estimates underlying the approved ONFA Reference Plan in effect.

OPG makes quarterly payments to the Used Fuel Fund over the life of its nuclear generating stations, as specified in the ONFA, including contributions to the NFWA Trust. The NFWA Trust forms part of the Used Fuel Fund, and contributions to the NFWA Trust, as required by the NFWA, may be applied towards OPG's ONFA payment obligations. Total required funding for 2014 under the ONFA was \$139 million (2013 – \$184 million). The portion of the total required funding for the years ended December 31, 2014 and 2013 related to the nuclear stations of the Prescribed Facilities, as determined in accordance with the ONFA, was \$170 million and \$98 million, respectively. Based on the approved 2012 ONFA Reference Plan, OPG is required to contribute annual amounts to the Used Fuel Fund ranging from \$143 million to \$288 million over the years 2015 to 2019, of which \$156 million to \$266 million is assigned to the nuclear stations of the Prescribed Facilities. Contributions are not currently required to the Decommissioning Fund based on the approved 2012 ONFA Reference Plan. Since OPG is responsible for the risks associated with liability cost increases and investment returns in the Decommissioning Fund, future contributions to the Decommissioning Fund may be required should the fund be in an underfunded position at the time of the next ONFA Reference Plan review. The required future ONFA contributions are disclosed in Note 13.

The *Nuclear Safety and Control Act* (Canada) requires OPG to have sufficient funds available to discharge the current nuclear decommissioning and waste management liabilities. As required by the terms of the ONFA, the Province has provided a Provincial Guarantee to the Canadian Nuclear Safety Commission (CNSC) since 2003, on behalf of OPG. The Provincial Guarantee provides for any shortfall between the CNSC consolidated financial guarantee requirement and the value of the Nuclear Funds. OPG pays the Province an annual guarantee fee of 0.5 percent of the amount of the Provincial Guarantee. The current value of the Provincial Guarantee amount of \$1,551 million is in effect through to the end of 2017. Based on this guarantee amount, OPG paid a guarantee fee of \$8 million to the Province for each of 2013 and 2014. The full amount of the guarantee fee is reflected in these financial statements.

The investments in the Nuclear Funds include a diversified portfolio of equities and fixed income securities that are invested across geographic markets, as well as investments in infrastructure, real estate, and agriculture. The Nuclear Funds are invested to fund long-term liability requirements and, as such, the portfolio asset mix is structured to achieve the required return over a long-term horizon. While short-term fluctuations in market value will occur, managing the long-term return of the Nuclear Funds remains the primary goal. OPG jointly oversees the investment management of the Nuclear Funds with the Province.

#### **Decommissioning Fund**

OPG bears the risk and liability for cost estimate changes and fund earnings in the Decommissioning Fund. As at December 31, 2014 and 2013, the Decommissioning Fund was in an overfunded position.

Upon termination of the ONFA, the Province has a right to any excess funds in the Decommissioning Fund, which is the excess of the fair market value of the Decommissioning Fund assets over the estimated completion costs, as per the most recently approved ONFA Reference Plan. When the Decommissioning Fund is overfunded, OPG and therefore the Prescribed Facilities, limit the earnings recognized in the financial statements by recording a payable to the Province, such that the balance of the Decommissioning Fund is equal to the cost estimate of the liability based on the most recently approved ONFA Reference Plan plus the portion of the surplus, if any, that OPG may direct to be treated as a contribution to the Used Fuel Fund. The payable to the Province may be reduced in subsequent

periods in the event that the Decommissioning Fund earns less than its target rate of return or in the event that a new ONFA Reference Plan is approved with a higher estimated decommissioning liability. When the Decommissioning Fund is underfunded, the earnings on the Decommissioning Fund reflect actual fund returns based on the market value of the assets.

The Province's right to any excess funding in the Decommissioning Fund upon termination of the ONFA results in OPG and therefore the Prescribed Facilities, capping annual fund earnings at 3.25 percent plus the long-term Ontario Consumer Price Index (CPI) specified in the most recently approved ONFA Reference Plan, which is the rate of growth in the liability for the estimated completion cost, as long as the Decommissioning Fund is in an overfunded status of less than 120 percent. Under the ONFA, if there is a surplus in the Decommissioning Fund such that the liabilities, as defined by the most recently approved ONFA Reference Plan, are at least 120 percent funded, OPG may direct up to 50 percent of the surplus over 120 percent to be treated as a contribution to the Used Fuel Fund, with the OEFC entitled to a distribution of an equal amount. Therefore, when the Decommissioning Fund is at least 120 percent funded, OPG and therefore the Prescribed Facilities recognize 50 percent of the excess greater than 120 percent in income.

#### Used Fuel Fund

OPG is responsible for the risk and liability of cost increases for used fuel waste management, subject to specified graduated liability thresholds, which limit OPG's total financial exposure at approximately \$13.7 billion in present value dollars as at December 31, 2014. The graduated liability thresholds do not apply to incremental used fuel bundles beyond 2.23 million.

Under the ONFA, the Province guarantees OPG's annual return in the Used Fuel Fund at 3.25 percent plus the change in the Ontario CPI for funding related to the first 2.23 million used fuel bundles (committed return). OPG and therefore the Prescribed Facilities recognize the committed return on the Used Fuel Fund as earnings on the Nuclear Funds. The difference between the committed return and the actual market return determined based on the fair value of the fund assets related to the first 2.23 million used fuel bundles is recorded as due to or due from the Province. The amount due to or due from the Province represents the amount that would be paid to or received from the Province if the committed return were to be settled as of the balance sheet date. As prescribed under the ONFA, OPG's contributions for fuel bundles in excess of 2.23 million are not subject to the Province's guaranteed rate of return, and earn a return based on changes in the market value of the assets of the Used Fuel Fund.

Under the ONFA, the Province is entitled to any surplus in the Used Fuel Fund, subject to a threshold funded ratio of 110 percent compared to the value of the associated liabilities based on the most recently approved ONFA Reference Plan. Upon termination of the Used Fuel Fund, the Province is entitled to any surplus above the 100 percent funded threshold.

The portion of OPG's nuclear fixed asset removal and nuclear waste management funds as at December 31 assigned to the Prescribed Facilities consists of the following:

	Fair Value		
(millions of dollars)	2014	2013	
Decommissioning Fund	3,889	3,492	
Due to Province – Decommissioning Fund	(582)	(330)	
	3,307	3,162	
Used Fuel Fund <sup>1</sup>	4,624	4,007	
Due to Province – Used Fuel Fund	(691)	(466)	
	3,933	3,541	
Total Nuclear Funds	7,240	6.703	
Less: current portion	13	12	
Non-current Nuclear Funds	7,227	6,691	

<sup>1</sup> The NFWA Trust is estimated to represent \$1,506 million as at December 31, 2014 (2013 – \$1,255 million) of the Prescribed Facilities' portion of the Used Fuel Fund on a fair value basis. As the NFWA does not provide a basis to assign OPG's contributions to the NFWA Trust to specific stations, this amount was estimated by allocating a portion of the total OPG amount related to the NFWA Trust in the same proportion as the total balance of the Used Fuel Fund was attributed to the Prescribed Facilities.

The total fair value of the securities invested by OPG in the Nuclear Funds as at December 31 is provided below. This information is not available for the Prescribed Facilities as the Nuclear Funds are managed on an aggregate basis.

	Fair Value		
(millions of dollars)	2014	2013	
<b>A A A A A A A A A A</b>	101		
Cash and cash equivalents and short-term investments	464	262	
Alternative investments	1,003	598	
Pooled funds	1,293	2,173	
Marketable equity securities	8,176	7,332	
Fixed income securities	5,969	4,713	
Net receivables/payables	3	32	
	16,908	15,110	
Due to Province	(2,529)	(1,614)	
	14,379	13,496	

The nature and type of investments made by OPG have the attributes of an investment company in accordance with ASC Topic 946. As such, beginning January 1, 2014, OPG applied guidance outlined in ASC Topic 946 for all investments owned by the Nuclear Funds. OPG's and the Prescribed Facilities' financial statements retained investment company accounting for the Nuclear Funds. The adoption of investment company accounting for the Nuclear Funds. The adoption of investment company accounting for the Nuclear Funds did not result in an effect on net income or change in net assets from operations, as investments held by the Nuclear Funds continue to be recorded at fair value. The investments in the Nuclear Funds are segregated from OPG's other assets that are not investment companies.

The historical cost, gross unrealized aggregate appreciation and depreciation of investment, gross unrealized foreign exchange gains, and fair value of the Nuclear Funds as at December 31, 2014 and 2013 are summarized below on a total OPG basis. This information is not available for the Prescribed Facilities as the Nuclear Funds are managed on an aggregated basis.

		2014	
	Decommissioning	Used Fuel	
(millions of dollars)	Fund	Fund	Total
Historical cost	6,188	8,163	14,351
Gross unrealized gains (losses)			
Aggregate appreciation	1,218	1,441	2,659
Aggregate depreciation	(150)	(174)	(324)
Foreign exchange	90	132	222
	7,346	9,562	16,908
Due to Province	(1,100)	(1,429)	(2,529)
Total fair value	6,246	8,133	14,379
Less: current portion	7	18	25
Non-current fair value	6,239	8,115	14,354

	Decommissioning	2013 Used Fuel	
(millions of dollars)	Fund	Fund	Total
Historical cost	5,571	7,240	12,811
Gross unrealized gains (losses)			
Aggregate appreciation	1,111	1,365	2,476
Aggregate depreciation	(118)	(136)	(254)
Foreign exchange	27	50	77
	6,591	8,519	15,110
Due to Province	(624)	(990)	(1,614)
Fair value	5,967	7,529	13,496
Less: current portion	12	13	25
Non-current fair value	5,955	7,516	13,471

Net realized and unrealized gains or losses from investments for the years ended December 31, 2014 and 2013 are summarized below on a total OPG basis. This information is not available for the Prescribed Facilities as the Nuclear Funds are managed on an aggregated basis.

		2014	
	Decommissioning	Used Fuel	
(millions of dollars)	Fund	Fund	Total
Net realized gains			
Realized gains	401	545	946
Realized foreign exchange gains	36	36	72
Net realized gains	437	581	1,018
Net unrealized gains			
Unrealized gains	75	38	113
Unrealized foreign exchange gains	63	82	145
Net unrealized gains	138	120	258

	2013		
(millions of dollars)	Decommissioning Fund	Used Fuel Fund	Total
Net realized gains			
Realized gains	182	174	356
Realized foreign exchange losses	(9)	(8)	(17)
Net realized gains	173	166	339
Net unrealized gains			
Unrealized gains	410	639	1,049
Unrealized foreign exchange gains	97	114	211
Net unrealized gains	507	753	1,260

The change in the Nuclear Funds attributed to the Prescribed Facilities for the years ended December 31 is as follows:

	Fair Value	
(millions of dollars)	2014	2013
Decempioning Fund havinging of your	2.402	2 0 0 0
Decommissioning Fund, beginning of year	3,162	3,029
Increase in fund due to return on investments	414	452
Decrease in fund due to reimbursement of expenditures	(17)	(23)
Increase in due to Province	(252)	(296)
Decommissioning Fund, end of year	3,307	3,162
Used Fuel Fund, beginning of year	3,541	3,288
Increase in fund due to contributions made	170	98
Increase in fund due to return on investments	459	533
Decrease in fund due to reimbursement of expenditures	(25)	(22)
Increase in due to Province	(212)	(356)
Used Fuel Fund, end of year	3,933	3,541

The earnings on the Nuclear Funds attributed to the Prescribed Facilities for the years ended December 31 are as follows:

(millions of dollars)	2014	2013
Decommissioning Fund Used Fuel Fund	162 247	156 177
Total earnings	409	333

# 9. INCOME TAXES

OPG and therefore the Prescribed Facilities follow the liability method of accounting for income taxes for all business segments and record an offsetting regulatory asset or liability for the deferred income taxes that are expected to be recovered or refunded through future regulated prices charged to customers.

Significant components of the income tax expense (recovery) of the Prescribed Facilities are presented in the table below:

(millions of dollars)	2014	2013
Current income tax expense (recovery):		
Current payable	84	24
Change in income tax positions	(15)	9
Income tax components of regulatory variance and deferral accounts	36	5
Scientific Research and Experimental Development investment tax credits	(26)	(28)
Other	11	3
	90	13
Deferred income tax expense (recovery):		
Change in temporary differences	79	(16)
Income tax components of regulatory variance and deferral accounts	(120)	(150)
Regulatory (asset)/liability for deferred income taxes	(22)	115
	(63)	(51)
Income tax expense (recovery)	27	(38)

A reconciliation between the statutory and the effective rate of income taxes for the Prescribed Facilities is as follows:

(millions of dollars)	2014	2013
Income (loss) before income taxes and extraordinary item	285	(113)
Combined Canadian federal and provincial statutory enacted		
income tax rates	26.5%	26.5%
Statutory income tax rates applied to accounting income (loss)	76	(30)
(Decrease) increase in income taxes resulting from:		
Income tax components of regulatory variance and deferral accounts	(84)	(145)
Non-taxable income items	11	17
Regulatory (asset)/liability for deferred income taxes	(22)	115
Scientific Research and Experimental Development investment tax credits, net of income tax	(13)	(21)
Other	59	26
	(49)	(8)
Income tax expense (recovery)	27	(38)
Effective rate of income taxes	9.5%	33.6%

The income tax effects of temporary differences that give rise to deferred income tax assets and liabilities of the Prescribed Facilities as at December 31 are as follows:

(millions of dollars)	2014	2013
Deferred income tax assets:		
Nuclear fixed asset removal and nuclear waste management liabilities	2,210	2.107
Other liabilities and assets	1,624	1,235
Future recoverable Ontario minimum tax	-	6
	3,834	3,348
Deferred income tax liabilities:		
PP&E and intangible assets	(1,226)	(920)
Nuclear fixed asset removal and nuclear waste management funds	(1,810)	(1,676)
Other liabilities and assets	(1,586)	(1,128)
	(4,622)	(3,724)
		<i>(</i> )
Net deferred income tax liabilities	(788)	(376)
Represented by:		
Current portion – asset	92	121
Long-term portion – liability	(880)	(497)
	(788)	(376)

Excluding the initial impact of the regulation of the Newly Regulated Hydroelectric Facilities, during 2014, the Prescribed Facilities' financial statements recorded an increase to the deferred income tax liability for the deferred income taxes that are expected to be recovered or refunded through regulated prices charged to customers of \$26 million (2013 – decrease of \$111 million). Since these deferred income taxes are expected to be recovered or refunded through future regulated prices, a corresponding change to the regulatory asset for deferred income taxes was recorded. As a result, the deferred income taxes for 2014 and 2013 were not impacted.

The following table summarizes the deferred income tax liabilities (assets) recorded by the Prescribed Facilities that are expected to be recovered or refunded through future regulated prices:

(millions of dollars)	2014	2013
January 1:		
Deferred income tax (assets) liabilities on temporary differences related to regulated operations	(5)	78
Deferred income tax (assets) liabilities resulting from the regulatory (liability) asset for deferred income taxes	(1)	27
	(6)	105
Impact of regulation of the Newly Regulated Hydroelectric Facilities: Deferred income tax liabilities on temporary differences as of June 30, 2014 related to the facilities prescribed for rate regulation effective in 2014 ( <i>Note 3</i> )	243	-
Deferred income tax liabilities resulting from the regulatory asset for deferred income taxes related to the rate regulation of facilities effective in 2014 ( <i>Note 3</i> )	81	-
	318	105
Changes during the year: Increase (decrease) in deferred income tax liabilities on temporary differences related to regulated operations, including the Newly Regulated Hydroelectric	20	(83)
Facilities effective July 1, 2014 Increase (decrease) in deferred income tax liabilities resulting from the regulatory asset/liability for deferred income taxes, including the Newly Regulated Hydroelectric Facilities effective July 1, 2014	6	(28)
Balance as at December 31	344	(6)

The tax benefit associated with an income tax position is recognized only when it is more likely than not that such a position will be sustained upon examination by the taxing authorities based on the technical merits of the position. The current and deferred income tax benefit is equal to the largest amount, considering possible settlement outcomes, that is greater than 50 percent likely of being realized upon settlement with the taxing authorities.

As OPG files income tax returns and pays income taxes on an aggregate basis for all of its operations, information on unrecognized tax benefits is provided on a total OPG basis. A reconciliation of the beginning and ending amount of OPG's total unrecognized tax benefits is provided in the table below.

(millions of dollars)	2014	2013
Liprocognized toy honofite, hoginating of your	01	00
Unrecognized tax benefits, beginning of year	91	82
Additions based on tax positions related to the current year	11	13
Additions for tax positions of prior years	12	-
Reductions for tax positions of prior years	(35)	(4)
Unrecognized tax benefits, end of year	79	91

As at December 31, 2014, OPG's unrecognized tax benefits were \$79 million (2013 – \$91 million), excluding interest and penalties, all of which, if recognized, would affect OPG's and the Prescribed Facilities' effective tax rate. Changes in unrecognized tax benefits over the next 12 months cannot be predicted with certainty.

OPG recognizes interest and penalties related to unrecognized tax benefits as income tax expense. As at December 31, 2014, OPG has recorded interest on unrecognized tax benefits of \$6 million (2013 – \$10 million) in its consolidated financial statements. OPG considers its significant tax jurisdiction to be Canada. OPG remains subject to income tax examination for years after 2012.

Cash income taxes are paid and tax refunds are received by OPG for all of its operations, including the Prescribed Facilities, on an aggregate basis. The amount of tax refunds received by OPG, net of taxes paid, during 2014 was \$29 million. OPG paid \$14 million in income taxes (net of tax refunds) during 2013.

The net assets contributed by the Newly Regulated Hydroelectric Facilities as at January 1, 2014 included \$181 million in net deferred income tax liabilities, which were reflected as a decrease of \$246 million in the Prescribed Facilities' net capital as at January 1, 2014 and an increase of \$65 million in the Prescribed Facilities' AOCI as at January 1, 2014.

## 10. PENSION AND OTHER POST-EMPLOYMENT BENEFITS

## **Fund Assets**

The OPG registered pension fund is managed on an aggregate basis for all of OPG's operations and the information on fund assets is presented below on this basis. There is no separate registered pension fund for the Prescribed Facilities.

The OPG registered pension fund investment guidelines are stated in an approved Statement of Investment Policies and Procedures (SIPP). The SIPP is reviewed and approved by the Audit and Risk Committee of OPG's Board of Directors at least annually and includes a discussion of investment objectives and expectations, asset mix and rebalancing, and the basis for measuring the performance of the pension fund assets.

In accordance with the SIPP, investment allocation decisions are made with a view to achieve OPG's objective of meeting obligations of the plan as they come due. The pension fund assets are invested in three categories of asset classes. The first category is liability hedging assets, which are intended to hedge the inflation and interest rate sensitivity of the plan liabilities. The second category is return enhancing assets, which are intended to obtain higher investment returns compared to the returns expected for liability hedging assets. The third category is return diversifying strategies, which are intended to improve the overall return of the pension fund while mitigating the downside market risk.

To achieve the above objective, OPG has adopted the following target strategic asset allocation:

	Target
Asset Class	
Liability Hedging Assets	54%
Return Enhancing Assets	33%
Return Diversifying Assets	13%

The plan may enter into derivative securities, such as interest rate swaps and forward foreign exchange contracts, for risk management purposes, where such activity is consistent with the plan's investment objectives.

#### Significant Concentrations of Risk in Fund Assets

The assets of the pension fund are diversified to limit the impact of any individual investment. The pension fund is diversified across multiple asset classes. Fixed income securities are diversified among Canadian government bonds, government agency bonds, real return bonds, corporate bonds, and an interest rate overlay hedging program, which is disclosed under pooled funds. Equity securities are diversified across Canadian, US, and non-North American stocks. There are also real estate and infrastructure portfolios that are approximately five percent of the total pension fund assets as at December 31, 2014. Investments in the above asset classes are further diversified across funds, investment managers, strategies, vintages, sectors and geographies, depending on the specific characteristics of each asset class.

Credit risk with respect to the pension fund's fixed income securities is managed by risk tolerance guidelines, which requires that fixed income securities comply with various investment constraints that ensure prudent diversification and prescribed minimum required credit rating quality. Credit risk as it relates to the pension fund's derivatives is managed through the use of International Swap and Derivatives Association documentation and counterparty management performed by the fund's investment managers.

## Risk Management

Risk management oversight with respect to the pension fund includes but is not limited to the following activities:

- Periodic asset/liability management and strategic asset allocation studies
- Monitoring of funding levels and funding ratios
- Monitoring compliance with asset allocation guidelines and investment management agreements
- Monitoring asset class performance against asset class benchmarks
- Monitoring investment manager performance against benchmarks
- Monitoring of risk tolerance guidelines.

## Expected Rate of Return on Plan Assets

The expected rate of return on plan assets is based on the fund's asset allocation, as well as return expectations considering long-term historical risks and returns associated with each asset class within the plan portfolio. The asset management decisions consider the economic liabilities of the plan.

## **Fair Value Measurements**

OPG is required to classify fair value measurements using a fair value hierarchy. This hierarchy groups financial instruments into three levels, based on the significance of inputs used in measuring the fair value of the assets and liabilities. Refer to Note 12 for a detailed discussion of fair value measurements and the fair value hierarchy.

The tables below present registered pension plan assets for all of OPG's operations measured at fair value in accordance with the fair value hierarchy. This information is not available separately for the Prescribed Facilities, as the OPG registered pension fund is managed on an aggregate basis for all of OPG's operations.

		December 31, 2014						
(millions of dollars)	Level 1	Level 2	Level 3	Total				
Cash and cash equivalents	251			251				
Short-term investments	231	- 3	-	231				
	-	3	-	3				
Fixed income								
Corporate debt securities	-	349	-	349				
Government bonds	-	1,704	-	1,704				
Equities								
Canadian	1,955	-	-	1,955				
US	2,016	-	-	2,016				
Non-North American	2,147	-	-	2,147				
Pooled funds	12	2,450	866	3,328				
nfrastructure	-	-	338	338				
Real estate and agriculture	-	-	300	300				
Other	-	-	5	5				
	6,381	4,506	1,509	12,396 <sup>1</sup>				

<sup>1</sup> The table above excludes pension fund receivables and payables.

		December 31, 2013					
(millions of dollars)	Level 1	Level 2	Level 3	Total			
Cash and cash equivalents	320	-	-	320			
Short-term investments	-	5	-	5			
Fixed income							
Corporate debt securities	-	315	-	315			
Government bonds	-	1,514	-	1,514			
Equities							
Canadian	2,087	-	-	2,087			
US	2,031	-	-	2,031			
Non-North American	2,357	-	-	2,357			
Pooled funds	38	1,959	11	2,008			
Infrastructure	-	-	208	208			
Real estate and agriculture	-	-	210	210			
Other	-	2	-	2			
	6,833	3.795	429	11,057			

<sup>1</sup> The table above excludes pension fund receivables and payables.

The following tables present the changes in the fair value of financial instruments classified as Level 3:

	For the years ended December 31					
(millions of dollars)	Pooled Funds	Infrastructure	Real Estate and Agriculture	Other	Total	
Opening balance, January 1, 2013	8	160	72	-	240	
Total realized and unrealized gains	3	19	6	-	28	
Purchases, sales, and settlements	-	29	132	-	161	
Closing balance, December 31, 2013	11	208	210	-	429	
Transfer from Level 2 to Level 3	-	-	-	2	2	
Total realized and unrealized gains	69	37	76	-	182	
Purchases, sales, and settlements	786	93	14	3	896	
Closing balance, December 31, 2014	866	338	300	5	1,509	

During the years ended December 31, 2014 and 2013, there were no transfers between Level 1 and Level 2.

## **Plan Costs and Liabilities**

OPG does not maintain separate pension and OPEB plans for the Prescribed Facilities. As of April 1, 2005, the effective date of the regulated prices established by the Province for the generation of the Previously Regulated Facilities prior to their regulation by the OEB, accrued assets and liabilities for pensions and OPEB recognized in OPG's consolidated financial statements, which were prepared in accordance with Canadian generally accepted accounting principles prior to January 1, 2012, were allocated among the Previously Regulated Facilities, OPG's other hydroelectric operations inclusive of the Newly Regulated Hydroelectric Facilities, and OPG's other operations. This allocation was determined on the basis of the number of regular OPG employees associated with the corresponding parts of OPG's business.

Subsequent to April 1, 2005, the majority of OPG's recognized post-employment benefit plan costs attributed to each of the Previously Regulated Facilities, OPG's other hydroelectric operations inclusive of the Newly Regulated Hydroelectric Facilities, and OPG's other operations are determined using direct assignment, primarily on the basis of labour costs incurred by the employees associated with the corresponding parts of OPG's business. The post-employment benefit plan costs associated with OPG's corporate support services are allocated to each of OPG's operations as part of the allocation of corporate support services costs, consistent with the methodology outlined in

independent cost allocation studies, the results of which were reflected in the regulated prices established by the OEB Decisions.

Following OPG's adoption of US GAAP effective January 1, 2012, unamortized actuarial gains or losses and past service costs or credits for pension and OPRB plans are recognized in AOCI and reported on the consolidated balance sheet as part of pension and OPEB liabilities that represent the funded status of these plans. The accumulated unamortized amounts as of the consolidated balance sheet date are allocated to each of the Previously Regulated Facilities, OPG's other hydroelectric operations inclusive of the Newly Regulated Hydroelectric Facilities, and OPG's other operations primarily in proportion to the allocation of the respective benefit costs for the year then ended.

As at December 31, 2013, a portion of OPG's pension and OPEB liabilities attributed to all of the OPG's hydroelectric operations other than the regulated hydroelectric facilities prescribed for rate regulation prior to 2014 was allocated to the Newly Regulated Hydroelectric Facilities, primarily using a combination of the number of regular employees and labour costs associated with these facilities. The resulting liabilities attributed to the Newly Regulated Hydroelectric Facilities. The resulting liabilities attributed to the Newly Regulated Hydroelectric Facilities were \$194 million for the pension plans and \$149 million for the OPEB plans. Combined, these liabilities were reflected as a decrease of \$86 million (before taxes) in the Prescribed Facilities' AOCI as at January 1, 2014.

Subsequent to December 31, 2013, a portion of the costs and AOCI balances attributed to OPG's hydroelectric operations other than the previously regulated hydroelectric facilities is allocated to the Newly Regulated Hydroelectric Facilities primarily on the basis of the number of full-time equivalent employees.

The OCI activity reported by the Prescribed Facilities during the year with respect to pension and OPEB plans represents the change during that year in the corresponding unamortized AOCI balances attributed to the Prescribed Facilities.

Pension fund contributions and expenditures on OPEB and supplementary pension plans are primarily allocated to the Prescribed Facilities in proportion to the respective benefit costs, using the methodology reflected in the regulated prices established by the OEB Decisions. For 2014, excluding the NWMO, \$322 million of OPG's total contribution of \$360 million to its registered pension plan was attributed to the Prescribed Facilities (2013 – \$243 million of OPG's total contribution of \$300 million). Excluding the NWMO, \$14 million of OPG's total expenditures for its supplementary pension plan of \$16 million in 2014 and \$83 million of OPG's total OPEB plan expenditures of \$93 million in 2014 were attributed to the Prescribed Facilities. For 2013, excluding the NWMO, \$11 million of OPG's total OPEB plan expenditures for its supplementary pension plan of \$14 million and \$71 million of its total OPEB plan expenditures of \$87 million were attributed to the Prescribed Facilities. Amounts for 2013 exclude the Newly Regulated Hydroelectric Facilities.

Separate actuarial assumptions are not made to derive pension and OPEB costs and obligations for the Prescribed Facilities. The assumptions used to derive OPG's total pension and OPEB obligations and costs, and therefore such amounts attributed to the Prescribed Facilities, are presented in the table below. These assumptions include those relating to post-employment benefit plans of the NWMO.

	Registered and Supplementary Pension Plans			Employment lefits
	2014	2013	2014	2013
Weighted Average Assumptions – Benefit Obligations at Year-End				
Rate used to discount future benefits	4.00%	4.90%	4.03%	4.91%
Salary schedule escalation rate - first six years	2.00%	2.50%	2.00%	2.50%
- thereafter	2.50%	2.50%	<b>2.50</b> %	2.50%
Rate of cost of living increase to pensions	2.00%	2.00%	n/a	n/a
Initial health care trend rate	n/a	n/a	6.09%	6.19%
Ultimate health care trend rate	n/a	n/a	4.33%	4.34%
Year ultimate health care trend rate reached	n/a	n/a	2030	2030
Rate of increase in disability benefits	n/a	n/a	2.00%	2.00%

	Registered and Supplementary Pension Plans			Employment efits
	2014	2013	2014	2013
Weighted Average Assumptions – Costs for the Year				
Expected return on plan assets, net of expenses	6.25%	6.25%	n/a	n/a
Rate used to discount future benefits	4.90%	4.30%	4.91%	4.32%
Salary schedule escalation rate	2.50%	2.50%	2.50%	2.50%
Rate of cost of living increase to pensions	2.00%	2.00%	n/a	n/a
Initial health care trend rate	n/a	n/a	6.19%	6.38%
Ultimate health care trend rate	n/a	n/a	4.34%	4.38%
Year ultimate health care trend rate reached	n/a	n/a	2030	2030
Rate of increase in disability benefits	n/a	n/a	2.00%	2.00%
Expected average remaining service life for employees (years)	12	13	13	14

The components of OPG's post-employment benefit costs attributed to the Prescribed Facilities for the years ended December 31, including those related to the post-employment benefits of the NWMO, are provided below. The costs were attributed to the Prescribed Facilities using the methodology reflected in the regulated prices established by the OEB Decisions.

	Registered Pension Plans		Supplementary Pension Plans		Other Post- Employment Benefits	
(millions of dollars)	2014	2013	2014	2013	2014	2013
Components of Cost Recognized						
Current service costs	213	236	7	8	58	86
Interest on projected benefit obligation	590	478	12	10	120	114
Expected return on plan assets, net of expenses	(563)	(526)	-	-	-	-
Amortization of net actuarial loss <sup>1</sup>	233	198	4	5	6	39
Recognition of LTD net actuarial gain	-	-	-	-	(3)	(26)
Costs recognized <sup>2</sup>	473	386	23	23	181	213

<sup>1</sup> The amortization of net actuarial loss was recognized as an increase to OCI. In 2014, this increase was offset by the impact of the Pension and OPEB Regulatory Asset discussed in Note 5. In 2013, the increase was partially offset by the impact of the Pension and OPEB Regulatory Asset.

<sup>2</sup> Excludes the impact of regulatory variance and deferral accounts discussed in Note 5.

Total post-employment benefit costs attributed to the Prescribed Facilities for the years ended December 31 including the impact of the regulatory variance and deferral accounts are as follows:

(millions of dollars)	2014	2013
Registered pension plans	473	386
Supplementary pension plans	23	23
Other post-employment benefits	181	213
Pension and OPEB Cost Variance Account (Note 5)	(254)	(312)
Pension & OPEB Cash Payment Variance Account (Note 5)	(6)	-
Pension & OPEB Cash Versus Accrual Differential Deferral Account (Note 5)	(36)	-
<b>-</b>		
Pension and other post-employment benefit costs	381	310

The following table provides the pension and OPEB liabilities reported by the Prescribed Facilities and their classification on the balance sheets as at December 31:

	•	Registered Pension Plans		Supplementary Pension Plans		Post- yment efits
(millions of dollars)	2014	2013	2014	2013	2014	2013
Current liabilities Non-current liabilities	- (2,988)	- (2,023)	(8) (266)	(7) (223)	(78) (2,616)	(72) (2,087)
Total liabilities	(2,988)	(2,023)	(274)	(230)	(2,694)	(2,159)

OPG's total accumulated benefit obligation for the registered pension plans and supplementary pension plans as at December 31, 2014 were \$14,333 million and \$274 million, respectively (2013 – \$12,242 million and \$237 million, respectively). The accumulated benefit obligation differs from the projected benefit obligation in that the accumulated benefit obligation about future compensation levels.

The following table provides the components of the Prescribed Facilities' OCI related to pension and OPEB plans and the offsetting Pension and OPEB Regulatory Asset discussed in Note 5 for the years ended December 31, on a pretax basis:

	Registered Pension Plans		Supplementary Pension Plans		Other Post- Employment Benefits	
(millions of dollars)	2014	2013	2014	2013	2014	2013
Changes in plan assets and benefit obligations recognized in OCI						
Current year net actuarial loss (gain)	875	(616)	22	(13)	295	(463)
Current year past service credits	-	-	-	-	-	(2)
Amortization of net actuarial loss	(233)	(198)	(4)	(5)	(6)	(39)
Total decrease (increase) in OCI	642	(814)	18	(18)	289	(504)
Less: (Increase) decrease in Pension and OPEB Regulatory Asset, excluding initial regulatory asset related to facilities prescribed for rate regulation beginning in 2014	(652)	814	(19)	18	(289)	504
Less: Recognition of initial pension and OPEB regulatory asset related to facilities prescribed for rate regulation beginning in 2014 (Note 3)	(219)	-	(5)	-	(21)	-
Net increase in OCI	(229)	-	(6)	-	(21)	-

The following table provides the components of the Prescribed Facilities' AOCI related to pension and OPEB plans that have not yet been recognized as components of benefit costs and the offsetting Pension and OPEB Regulatory Asset as at December 31, on a pre-tax basis:

	5 11		ementary Em		her Post- ployment Benefits	
(millions of dollars)	2014	2013	2014	2013	2014	2013
Unamortized amounts recognized in AOCI						
Past service costs	-	-	-	-	1	1
Net actuarial loss	3,702	2,831	88	64	572	262
Total recognized in AOCI	3,702	2,831	88	64	573	263
Less: Pension and OPEB Regulatory Asset (Note 5)	3,702	2,831	88	64	573	263
Net recognized in AOCI	_	-	-	-	-	-

The following table provides the components of the Prescribed Facilities' AOCI and the offsetting Pension and OPEB Regulatory Asset as at December 31, 2014 (included in the table above) that were expected to be amortized as components of benefit costs and recognized as increases to OCI and reductions in the Pension and OPEB Regulatory Asset in 2015 on a pre-tax basis, as at December 31, 2014:

(millions of dollars)	Registered Pension Plans	Supplementary Pension Plans	Other Post- Employment Benefits
Net actuarial loss	261	5	25
Total increase in AOCI	261	5	25
Less: Estimated decrease in Pension and OPEB Regulatory Asset	261	5	25
Net increase in AOCI	-	-	-

Based on the most recently filed actuarial valuation for funding purposes of the OPG registered pension plan, as at January 1, 2014, there was an unfunded liability on a going concern basis of \$1,143 million and a deficiency on a wind-up basis of \$7,034 million. In the previously filed actuarial valuation, as at January 1, 2011, there was an unfunded liability on a going-concern basis of \$555 million and a deficiency on a wind-up basis of \$5,663 million. The funded status to be determined in the next filed funding valuation, which must have an effective date no later than January 1, 2017, could be significantly different. This information is not available for the Prescribed Facilities, as separate actuarial valuations for funding purposes are not performed for the Prescribed Facilities.

As at December 31, 2014, OPG's required contribution to its registered pension plan for 2015 was expected to be \$364 million, of which \$335 million was estimated to be attributable to the Prescribed Facilities. The amount of OPG's additional, voluntary contribution, if any, is revisited from time to time. OPG will continue to assess the requirements for contributions to the pension plan.

The supplementary pension plans are not funded, but are secured by Letters of Credit totaling \$310 million as at December 31, 2014 (2013 – \$302 million) for all of OPG's operations.

Estimated future benefit payments to all participants in the pension and OPEB plans on an OPG-wide basis based on the assumptions used to measure the benefit obligations as at December 31, 2014 are presented in the table below. These benefit plans are managed on an aggregate basis for all of OPG's operations.

(millions of dollars)	Registered Pension Plans	Supplementary Pension Plans	Other Post- Employment Benefits
2015	563	10	93
2016	590	11	97
2017	596	11	101
2018	634	12	107
2019	666	13	112
2020 through 2024	3,788	77	636

A one percent increase or decrease in OPG's health care trend rate assumption would result in an increase in the current service and interest components of the 2014 OPEB cost recognized in the Prescribed Facilities' financial statements of approximately \$38 million (2013 – \$44 million) or a decrease in the service and interest components of the 2014 OPEB cost recognized in the Prescribed Facilities' financial statements of approximately \$28 million (2013 – \$44 million) are decreased in the service and interest components of the 2014 OPEB cost recognized in the Prescribed Facilities' financial statements of approximately \$28 million (2013 – \$32 million).

A one percent increase or decrease in the health care trend rate would result in an increase in OPG's total projected OPEB obligation as at December 31, 2014 of \$567 million (2013 – \$472 million) or a decrease in OPG's total projected OPEB obligation as at December 31, 2014 of \$432 million (2013 – \$360 million).

Filed: 2016-05-27 EB-2016-0152 Exhibit A2-1-1 Attachment 6 Page 52 of 64

## 11. RISK MANAGEMENT AND DERIVATIVES

The Prescribed Facilities are exposed to risks related to changes in market interest rates through the debt owed to OPG and movements in foreign currency that affect its assets, liabilities, and forecasted transactions. Select derivative instruments are used by OPG to manage such risks related to changes in market interest rates and movements in foreign currency, and a portion of the financial impacts of these instruments is attributed to the Prescribed Facilities. OPG's derivatives attributed in whole or in part to the Prescribed Facilities are used as hedging instruments only.

Interest rate risk is the risk that the value of assets and liabilities can change due to movements in related interest rates. Interest rate risk for OPG, and therefore the Prescribed Facilities, through the debt and net interest expense derivation methodologies established by the OEB Decisions, arises with the need to refinance existing debt and/or undertake new financing. The management of these risks includes using derivatives, a portion of the financial impact of which is included in the derivation of the Prescribed Facilities' net interest expense on the long-term debt, to hedge the exposure in accordance with corporate risk management policies. OPG periodically uses interest rate swap agreements to mitigate elements of interest rate risk exposure associated with anticipated financing. A portion of applicable gains and losses on OPG's interest rate hedges that are effective is reflected in the net interest expense of the Prescribed Facilities, using the methodology approved in the OEB Decisions for the determination of interest expense.

The Prescribed Facilities' financial results are exposed to volatility in the Canadian/US foreign exchange rate as fuels and certain supplies and services purchased by OPG for generating stations and major development projects are primarily denominated in, or tied to US dollars. OPG enters into foreign exchange derivatives and agreements with major financial institutions, when appropriate, in order to manage the exposure to foreign currency movements. The financial impacts of hedging derivative instruments related to movements in foreign currency are attributed to the Prescribed Facilities on the basis of the underlying assets, liabilities, or forecasted transactions.

During the period from January 1, 2014 to October 31, 2014, the Prescribed Facilities were exposed to the risk of adverse changes in electricity prices associated with a wholesale spot market for electricity, as the revenue from electricity generated by the Newly Regulated Hydroelectric Facilities during that period was based on the Ontario electricity spot market price. Effective November 1, 2014, this risk exposure has been largely mitigated with the implementation of a regulated price for these facilities.

The majority of OPG's and the Prescribed Facilities' revenues are derived from sales through the IESO-administered spot market. Market participants in the IESO spot market provide collateral in accordance with the IESO prudential support requirements to cover funds that they might owe to the market. Although the credit exposure to the IESO represents a significant portion of both OPG's and the Prescribed Facilities' accounts receivable, OPG's management accepts this risk due to the IESO's primary role in the Ontario electricity market. The remaining receivables exposure is to a diverse group of generally high quality counterparties. The portion of OPG's allowance for doubtful debts attributed to the Prescribed Facilities and reported in these financial statements as at December 31, 2014 was less than \$1 million.

The following table shows amounts related to derivatives recorded in and reclassified from AOCI for the years ended December 31, on a pre-tax basis:

(millions of dollars)	2014	2013
Cash flow hedges		
Gains in OCI	1	3
Reclassification of losses from AOCI	9	9

As at December 31, 2014, existing net losses of \$11 million deferred in AOCI were expected to be reclassified from AOCI within the next 12 months.

## 12. FAIR VALUE MEASUREMENTS

OPG is required to classify fair value measurements using a fair value hierarchy. This hierarchy groups financial assets and liabilities into three levels, based on the inputs used in measuring the fair value of the financial assets and liabilities. The fair value hierarchy has the following levels:

- Level 1: Valuation of inputs is based on unadjusted quoted market prices observed in active markets for identical assets or liabilities.
- Level 2: Valuation is based on inputs other than quoted prices under Level 1 that are observable for the asset or liability, either directly or indirectly.
- Level 3: Valuation is based on inputs for the asset or liability that are not based on observable market data.

The fair value of financial instruments traded in active markets is based on quoted market prices at the balance sheet dates. A market is regarded as active if quoted prices are readily and regularly available from an exchange, dealer, broker, industry group, pricing service, or regulatory agency, and those prices represent actual and regularly occurring market transactions on an arm's length basis. The quoted market price used for financial assets attributed to the Prescribed Facilities is the current bid price. These instruments are included in Level 1 and are comprised primarily of equity investments and fund investments.

For financial instruments for which quoted market prices are not directly available, fair values are estimated using forward price curves developed from observable market prices or rates. The estimation of fair value may include the use of valuation techniques or models, based wherever possible on assumptions supported by observable market prices or rates prevailing at the balance sheet dates. This is the case for over-the-counter derivatives and securities, which include energy commodity derivatives, foreign exchange derivatives, interest rate swap derivatives, and fund investments. Pooled fund investments are valued at the unit values supplied by the pooled fund administrators. The unit values represent the underlying net assets at fair values, determined using closing market prices. Valuation models use general assumptions and market data and therefore do not reflect the specific risks and other factors that would affect a particular instrument's fair value. The methodologies used for calculating the fair value adjustments are reviewed on an ongoing basis to ensure that they remain appropriate. If all significant inputs required to fair value an instrument are observable, the instrument is included in Level 2.

If one or more of the significant inputs is not based on observable market data, the instrument is included in Level 3. Specific valuation techniques are used to value these instruments. Significant Level 3 inputs include: recent comparable transactions, comparable benchmark information, bid/ask spread of similar transactions, and other relevant factors.

Transfers into, out of, or between hierarchy levels are deemed to have occurred on the date of the event or change in circumstances that caused the transfer to occur.

OPG is required to determine the fair value of all its financial instruments. The following is a summary of OPG's financial instruments attributed to the Prescribed Facilities as at December 31, the impact of which is reported in these financial statements:

		Fair Value		ying ue ¹		
(millions of dollars)	2014	2013	2014	2013	Balance Sheet Line Item	
Nuclear fixed asset removal and nuclear waste management funds (includes current portion)	7,240	6,703	7,240	6,703	Nuclear fixed asset removal and nuclear waste management funds	
Foreign exchange derivative instruments	1	1	1	1	Other accounts receivable and prepaid expenses	
Long-term debt	(5,235)	(3,971)	(5,235)	(3,971)	Long-term debt	

<sup>1</sup> The carrying values of other financial instruments including cash and cash equivalents, receivables from related parties, other accounts receivable and prepaid expenses, accounts payable and accrued charges, and due to Ontario Power Generation Inc. approximate their fair values due to the immediate or short-term maturity of these financial instruments.

The following tables present financial assets and liabilities of the Prescribed Facilities measured at fair value in accordance with the fair value hierarchy. The net changes in amounts related to the Nuclear Funds for the respective years were estimated in proportion to the Prescribed Facilities' portion of OPG's total balance of the Nuclear Funds.

	December 31, 2014					
(millions of dollars)	Level 1	Level 2	Level 3	Total		
Assets						
Decommissioning Fund	1,626	1,475	206	3,307		
Used Fuel Fund	298	3,600	35	3,933		
Foreign exchange derivative instruments	-	1	-	1		
Net assets	1,924	5,076	241	7,241		

(millions of dollars)	December 31, 2013					
	Level 1	Level 2	Level 3	Total		
Assets						
Decommissioning Fund	1,593	1,438	131	3,162		
Used Fuel Fund	247	3,274	20	3,541		
Foreign exchange derivative instruments	-	1	-	1		
Net assets	1,840	4,713	151	6,704		

During the year ended December 31, 2014, there were no transfers between Level 1 and Level 2. In addition, there were no transfers into and out of Level 3.

The following tables present the changes in assets and liabilities of the Prescribed Facilities measured at fair value based on Level 3 for the years ended December 31:

(millions of dollars)	Decom- missioning Fund	Used Fuel Fund
Opening balance, January 1, 2013	87	6
Unrealized gains included in earnings on Nuclear Funds	10	0
Realized losses included in earnings on Nuclear Funds		I
Purchases	(1) 44	- 7
Sales		/
Settlements	(2) (7)	- 6
	(1)	0
Closing balance, December 31, 2013	131	20
Unrealized gains included in earnings on Nuclear Funds	10	2
Realized gains included in revenue	1	-
Purchases	78	14
Sales	(6)	(1)
Settlements	(8)	-
Closing balance, December 31, 2014	206	35

## **Nuclear Funds**

OPG's Nuclear Funds' investments classified as Level 3 consist of real estate and infrastructure investments within the alternative investment portfolio. The fair value of the investments within the Nuclear Funds' alternative investment portfolio is determined using acceptable industry valuation methods, such as recent arm's length market transactions, reference to comparable securities of issuers with similar credit ratings, discounted cash flow analyses, third-party independent appraisals, valuation multiples, or other valuation methods. Any control, size, liquidity or other discounts or premiums on the investments are considered in the determination of fair value.

The process of valuing investments for which no published market price exists is based on inherent uncertainties and the resulting values may differ from values that would have been used had a ready market existed for the investments. The values may also differ from the prices at which the investments may be sold.

The table below presents the classes of investments within OPG's total Nuclear Funds that are reported on the basis of net asset value as at December 31, 2014. This information is not available separately for the Prescribed Facilities as the Nuclear Funds are managed on a total basis for all of OPG's nuclear stations.

(millions of dollars except where noted)	Fair Value	Unfunded Commitments	Redemption Frequency	Redemption Notice
Infrastructure	496	262	n/a	n/a
Real Estate	507	256	n/a	n/a
Pooled Funds				
Short-term Investments	18	n/a	Daily	1 - 5 Days
Fixed Income	585	n/a	Daily	1 - 5 Days
Equity	690	n/a	Daily	1 - 5 Days
Total	2,296	518		

The fair value of the above investments is classified as either Level 2 or Level 3.

#### **Infrastructure**

This class includes investments in funds whose investment objective is to generate a combination of long-term capital appreciation and current income, generally through investments such as energy, transportation and utilities. The fair

values of investments in this class have been estimated using the Nuclear Funds' ownership interest in partners' capital and/or underlying investments held by subsidiaries of an infrastructure fund. The investments in the respective infrastructure funds are not redeemable. However, the Nuclear Funds may transfer any of their partnership interests/shares to another party, as stipulated in the partnership agreements and/or shareholders' agreements. Distributions from each infrastructure fund will be received based on the operations of the underlying investments of the infrastructure funds are liquidated. It is not possible to estimate when the underlying assets of the infrastructure funds will be liquidated. However, the infrastructure funds have a maturity end period ranging from 2019 to 2025.

## Real Estate

This class includes investment in institutional-grade real estate property located in Canada. The investment objective is to provide a stable level of income with the opportunity for long-term capital appreciation. The fair values of the investments in this class have been estimated using the net asset value of the Nuclear Funds' ownership interest in these investments. The partnership investments are not redeemable. However, the Nuclear Funds may transfer any of their partnership interests to another party, as stipulated in the partnership agreement, with prior written consent of the other limited partners. For investments in private real estate corporations, shares may be redeemed through a pre-established redemption process. It is not possible to estimate when the underlying assets in this class will be liquidated.

## Pooled Funds

This class represents investments in pooled funds, which primarily include a diversified portfolio of fixed income securities, issued mainly by Canadian corporations and diversified portfolios of Emerging Market listed equity. The investment objective of the pooled funds is to achieve capital appreciation and income through professionally managed portfolios. The fair value of the investments in this class has been estimated using the net asset value per share of the investments. There are no significant restrictions on the ability to sell investments in this class.

## 13. COMMITMENTS AND CONTINGENCIES

## Litigation

Various legal proceedings are pending against OPG and its subsidiaries covering a wide range of matters that arise in the ordinary course of their business activities. These proceedings may impact the Prescribed Facilities. Each of these matters is subject to various uncertainties. Some of these matters may be resolved unfavourably with respect to OPG and the Prescribed Facilities. While it is not possible to determine the ultimate outcome of the various pending actions, it is OPG's belief that their resolution is not likely to have a material adverse effect on the financial position of OPG or the Prescribed Facilities.

## **Contractual and Commercial Commitments**

The portions of OPG's contractual obligations and other significant commercial commitments related to the Prescribed Facilities as at December 31, 2014 were determined primarily using specific identification, and are as follows:

(millions of dollars)	2015	2016	2017	2018	2019	Thereafter	Total
Contractual obligations:							
Fuel supply agreements	171	151	135	115	32	33	637
Contributions under the ONFA <sup>1</sup>	172	177	156	175	266	1,197	2,143
Contributions to the OPG registered pension plan <sup>2</sup>	335	341	-	-	-	-	676
Operating lease obligations	15	14	15	13	12	65	134
Commitments related to Darlington Refurbishment <sup>3</sup>	150	-	-	-	-	-	150
Operating licence	22	23	23	18	19	-	105
Unconditional purchase obligations	85	7	-	-	-	-	92
Accounts payable and accrued charges	903	-	-	-	-	9	912
Other	70	14	13	5	60	9	171
Total	1.923	727	342	326	389	1.313	5.020

<sup>1</sup> Contributions under the ONFA are based on the 2012 ONFA Reference Plan contribution schedule approved in 2012. The updated ONFA Reference Plan is expected to be effective January 1, 2017.

<sup>2</sup> The estimated portion of OPG's pension contributions attributed to the Prescribed Facilities includes ongoing funding requirements, and additional funding requirements towards the deficit, in accordance with the actuarial valuation of the OPG registered pension plan as at January 1, 2014. The next actuarial valuation of the OPG registered pension plan must have an effective date no later than January 1, 2017. The pension contributions are affected by various factors including market performance, changes in actuarial assumptions, plan experience, changes in the pension regulatory environment, and the timing of funding valuations. Funding requirements after 2016 are excluded due to significant variability in the assumptions required to project the timing of future cash flows. The amount of OPG's additional, voluntary contribution, if any, is revisited from time to time.

<sup>3</sup> Estimated committed costs as at December 31, 2014 to close the project, including demobilization of project staff and cancellation of existing contracts and material orders.

Contractual and commercial commitments as noted exclude certain purchase orders, as they represent purchase authorizations rather than legally binding contracts, and are subject to change without significant penalties.

## **Collective Bargaining Agreements**

OPG maintains labour agreements with the Power Workers' Union (PWU) and the Society of Energy Professionals (The Society). As at December 31, 2014, OPG had approximately 9,700 regular employees, of which approximately 89 percent was covered by the collective bargaining agreements.

The collective agreement between OPG and the PWU in effect as at December 31, 2014 expired on March 31, 2015. In May 2015, OPG and the PWU agreed to renew the respective collective agreement for a three-year term, expiring on March 31, 2018. The changes to the collective agreement with the PWU include increases to employee pension plan contributions in each year of the agreement.

The collective agreement with The Society in effect as at December 31, 2014 expired on December 31, 2015. In November 2015, OPG and The Society agreed to renew the respective collective agreement for a three-year term, expiring on December 31, 2018. The changes to the collective agreement with The Society include increases to employee pension plan contributions in each of the first two years of the agreement.

The changes to both agreements will provide existing employees with lump sum payments for each of the first two years of the contract and eligibility to annually receive shares in Hydro One Inc. (Hydro One) for up to 15 years starting in year three of the contract, as long as these employees continue to make contributions to the OPG pension

plan. The contract term of both agreements was conditional on the initial public offering of Hydro One shares, which occurred in November 2015.

In April 2016, OPG acquired nine million common shares of Hydro One at \$23.65 per share as part of a secondary share offering by the Province through a syndicate of underwriters. OPG paid the same price as other investors in the offering. The acquisition was made for investment purposes to mitigate the risk of future price volatility related to OPG's future share delivery obligations under the collective agreements. The shares acquired in this transaction represent the substantial majority of OPG's currently anticipated purchases of Hydro One shares.

The collective agreement with The Society that expired on December 31, 2015 was established through an arbitration award issued on April 8, 2013. The Society filed a Judicial Review Application in the second quarter of 2013 to the Superior Court of Ontario in the matter of the arbitration award. The case was heard at the Divisional Court of Ontario and a ruling was issued in November 2014 dismissing The Society's application. In December 2014, the Society filed a motion for leave to appeal the Divisional Court ruling. The motion was dismissed by the Court of Appeal in March 2015.

Approximately 90 percent of OPG's regular labour force as at December 31, 2014 was estimated to relate to the Prescribed Facilities.

## 14. BUSINESS SEGMENTS

The Prescribed Facilities have three reportable business segments. The business segments are Nuclear Generation, Nuclear Waste Management, and Hydroelectric. Starting on January 1, 2014, the Hydroelectric segment includes the results of the Newly Regulated Hydroelectric Facilities as they became rate regulated in that year. The 2013 comparative information for the Hydroelectric segment does not include the results of these facilities.

As a result of the basis of presentation of these financial statements described in Note 2, the financial position and results of operations of the business segments reported in these financial statements will not be identical to the financial position and results of operations that would have resulted had the Prescribed Facilities historically operated on a standalone basis, and may differ from the financial position and results of operations of the business segments reported in OPG's consolidated financial statements.

OM&A expenses of the Prescribed Facilities' generation business segments include a service fee for the use of certain PP&E and intangible assets held by OPG's unregulated operations. The service fee is recorded in OM&A expenses with a corresponding payable in the due to/from account with OPG. For the year ended December 31, 2014, the service fee was \$23 million for the Nuclear Generation segment and \$6 million for the Hydroelectric segment. For the year ended December 31, 2013, the service fee was \$23 million for the Hydroelectric segment and \$2 million for the Hydroelectric segment.

## **Nuclear Generation Segment**

The Nuclear Generation business segment operates in Ontario, generating and selling electricity from the Pickering and the Darlington generating stations, both owned and operated by OPG. The business segment also includes revenue earned from heavy water sales, isotope sales, detritiation services, and ancillary services for voltage control and reactive support. These revenues are included by the OEB in determining the regulated prices for the nuclear stations of the Prescribed Facilities, which has had the effect of reducing these prices.

## **Nuclear Waste Management Segment**

The Nuclear Waste Management business segment reports the results of operations associated with the management of nuclear used fuel and L&ILW produced by the Darlington and Pickering nuclear generating stations, the decommissioning of the Darlington and Pickering nuclear generating stations, the management of the portion of

OPG's Nuclear Funds attributable to the Prescribed Facilities, and related activities including the inspection and maintenance of the waste storage facilities. Accordingly, accretion expense on the Prescribed Facilities' portion of the Nuclear Liabilities and earnings from the Prescribed Facilities' portion of the Nuclear Funds are reported under this segment.

As the nuclear generating stations operate over time, incremental costs are incurred related to used nuclear fuel and L&ILW, which increase the Nuclear Liabilities. These incremental costs are charged to current operations in the Nuclear Generation segment in order to reflect the cost of producing energy. Since the incremental costs increase the Nuclear Liabilities reported in the Nuclear Waste Management segment, an inter-segment charge is recorded between the Nuclear Generation and the Nuclear Waste Management segments. The impact of the inter-segment charge is eliminated on the statements of income (loss) and balance sheets of the Prescribed Facilities.

## **Hydroelectric Segment**

The Hydroelectric business segment operates in Ontario, generating and selling electricity from the following regulated hydroelectric facilities operated by OPG: Sir Adam Beck 1, 2 and Pump generating station, DeCew Falls 1 and 2, and the R.H. Saunders hydroelectric facilities, and beginning on January 1, 2014, the Newly Regulated Hydroelectric Facilities. The Hydroelectric business segment also includes ancillary services revenue related to these stations earned through offering available generating capacity as operating reserve and through the supply of other ancillary services including voltage control and reactive support, certified black start facilities, regulation service, and other services. These revenues are included by the OEB in determining the regulated prices for the hydroelectric stations of the Prescribed Facilities, which has had the effect of reducing these prices.

Segment Income (Loss) for the Year Ended					
December 31, 2014	Nuclear	Nuclear Waste			
(millions of dollars)	Generation	Management	Hydroelectric <sup>1</sup>	Elimination	Total
Revenue	2,761	66	1,417	(61)	4,183
Fuel expense	232	-	343	-	575
Gross margin	2,529	66	1,074	(61)	3,608
Operations, maintenance and administration	1,983	74	325	(61)	2,321
Depreciation and amortization	483	-	167	-	650
Accretion on nuclear fixed asset removal and nuclear waste management liabilities	-	465	-	-	465
Earnings on nuclear fixed asset removal and nuclear waste management funds	-	(409)	-	-	(409)
Regulatory disallowance related to the Niagara Tunnel project	-	-	77	-	77
Property taxes	13	-	1	-	14
Other loss	-	-	2	-	2
Income (loss) before interest, income taxes, and extraordinary item	50	(64)	502	-	488

The 2013 comparative information for the Hydroelectric segment does not include the results of the Newly Regulated Hydroelectric Facilities, as discussed in Note 2.

<sup>1</sup> Includes the results of the Newly Regulated Hydroelectric Facilities for the full year.

# Segment (Loss) Income for

the Year Ended December 31, 2013	Nuclear	Nuclear Waste			
(millions of dollars)	Generation	Management	Hydroelectric <sup>1</sup>	Elimination	Total
Revenue	2,647	61	843	(57)	3,494
Fuel expense	217	-	268	-	485
Gross margin	2,430	61	575	(57)	3,009
Operations, maintenance and administration	2,022	69	108	(57)	2,142
Depreciation and amortization	591	-	129	-	720
Accretion on nuclear fixed asset removal and nuclear waste management liabilities	-	441	-	-	441
Earnings on nuclear fixed asset removal and nuclear waste management funds	-	(333)	-	-	(333)
Property and capital taxes	15	-	-	-	15
Other income	(1)	-	-	-	(1)
(Loss) income before interest, income taxes, and extraordinary item	(197)	(116)	338	-	25

<sup>1</sup> Excludes the results of the Newly Regulated Hydroelectric Facilities.

Selected Balance Sheet Information				
as at December 31, 2014	Nuclear	Nuclear Waste	Hydro-	
(millions of dollars)	Generation	Management	electric <sup>1</sup>	Total
Segment property, plant and equipment in-service, net	2,924	-	7,483	10,407
Segment construction in progress	1,653	-	86	1,739
Segment property, plant and equipment, net	4,577	-	7,569	12,146
Segment intangible assets in-service, net	11	-	1	12
Segment development in progress	2	-	1	3
Segment intangible assets, net	13	-	2	15
Segment fuel inventory	298	-	-	298
Segment materials and supplies inventory, net:		-		
Current	93	-	-	93
Long-term	332	-	1	333
Nuclear fixed asset removal and nuclear waste management funds (current and non-current portions)	-	7,240	-	7,240
Nuclear fixed asset removal and nuclear waste management liabilities	-	(8,843)	-	(8,843)

<sup>1</sup> Includes the results of the Newly Regulated Hydroelectric Facilities.

as at December 31, 2013 (millions of dollars)	Nuclear Generation	Nuclear Waste	Hydro- electric <sup>1</sup>	Total
	Generation	Management	electric	TOLA
Segment property, plant and equipment in-service,	net 3,005	-	5,099	8,104
Segment construction in progress	866	-	24	890
Segment property, plant and equipment, net	3,871	-	5,123	8,994
Segment intangible assets in-service, net	15	-	1	16
Segment development in progress	2	-	-	2
Segment intangible assets, net	17	-	1	18
Segment fuel inventory	334	-	-	334
Segment materials and supplies inventory, net:		-		
Current	94	-	-	94
Long-term	322	-	-	322
Nuclear fixed asset removal and nuclear waste management funds (current and non-current portions)	-	6,703	-	6,703
Nuclear fixed asset removal and nuclear waste management liabilities	-	(8,430)	-	(8,430)
Excludes the results of the Newly Regulated Hydroelect	tric Facilities.			
Selected Cash				
Flow Information (millions of dollars)		luclear Waste Management	Hydroelectric <sup>1</sup>	Tota

Flow Information (millions of dollars)	Nuclear Generation	Nuclear Waste Management	Hydroelectric <sup>1</sup>	Total
Year ended December 31, 2014 Investment in property, plant and equipment, and intangible assets	991		84	1,075
Year ended December 31, 2013 Investment in property, plant and equipment, and intangible assets	633	-	114	747

<sup>1</sup> Amounts for the Newly Regulated Hydroelectric Facilities are included beginning on January 1, 2014.

## 15. RELATED PARTY TRANSACTIONS

Given that the Province owns all of the shares of OPG, related parties of OPG, and therefore the Prescribed Facilities, include the Province and other entities controlled by the Province including Hydro One, the IESO, and the OEFC, and jointly controlled entities. The transactions between OPG and related parties are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties.

		2014		2013	
(millions of dollars)	Revenue	Expenses	Revenue	Expenses	
Hydro One					
Electricity sales	23	-	-	-	
Services	1	12	-	9	
Province of Ontario					
Decommissioning Fund excess funding	-	252	-	296	
Used Fuel Fund rate of return guarantee	-	212	-	356	
Gross revenue charges	-	108		69	
ONFA guarantee fee	-	8	-	8	
Pension benefits guarantee fee	-	2		1	
OEFC					
Gross revenue charges		201		182	
Income taxes, net of investment tax credits		78		(7)	
	-	70	-	(7)	
Capital tax	-	-	-	I	
IESO					
Electricity related revenue	4,077	-	3,346	-	
	4,101	873	3,346	915	

OPG's related party transactions were attributed to the Prescribed Facilities primarily using direct assignment of OPG's respective amounts as applicable, and are summarized below for the years ended December 31:

As at December 31, 2014, the Prescribed Facilities' reported accounts receivable included a specifically identified amount of \$435 million (2013 – \$277 million) of the total OPG amount due from the IESO and \$1 million (2013 – nil) due from Hydro One. The Prescribed Facilities' reported accounts payable and accrued charges as at December 31, 2014 included an estimated amount of \$52 million (2013 – \$46 million) of the total OPG amount due to the OEFC, \$8 million (2013 – \$3 million) due to Hydro One, and \$3 million (2013 – \$2 million) due to the Province.

## 16. RESEARCH AND DEVELOPMENT

For the year ended December 31, 2014, research and development expenses of \$86 million (2013 – \$95 million) were charged to operations in the Prescribed Facilities' financial statements. The amount of expenses attributed to the Prescribed Facilities was primarily determined by direct assignment of OPG's total research and development expenses.

## 17. NET CHANGES IN NON-CASH WORKING CAPITAL BALANCES

(millions of dollars)	2014	2013
Receivables from related parties	(123)	12
Other accounts receivable and prepaid expenses	19	10
Fuel inventory	36	(6)
Materials and supplies	1	(11)
Accounts payable and accrued charges	236	102
Due to Ontario Power Generation Inc.	228	(447)
Income taxes payable/recoverable	11	(18)
	408	(358)

## **18. SUBSEQUENT EVENT**

In December 2014, under case number EB-2014-0370, OPG filed an application with the OEB to recover approximately \$1.8 billion in December 31, 2014 balances in most of the authorized regulatory variance and deferral accounts. A partial settlement agreement between OPG and intervenors providing for recovery of approximately \$1.5 billion of the total amount sought by OPG was approved by the OEB in June 2015 (the Partial Settlement Agreement). On September 10, 2015, the OEB issued its decision approving for recovery, without adjustments, the remaining balances totaling \$263 million requested in OPG's application, which were not covered by the Partial Settlement.

The OEB's approvals included recovery of \$714 million in the Pension and OPEB Cost Variance Account, recorded during 2013 and 2014, over six years starting on July 1, 2015 and \$225 million recorded in the variance account prior to 2013 that will continue to be recovered until December 31, 2024 as previously authorized by the OEB. The remaining approved balances of \$809 million included \$154 million for the portion of the Bruce Lease Net Revenues Variance Account related to the impact of the derivative liability embedded in the Bruce Lease and recorded prior to the reversal of the derivative liability in December 2015 discussed in Note 5, and other account balances, the majority of which were approved for recovery over a period of 18 months from July 1, 2015 to December 31, 2016. The OEB authorized the approved portion of the Bruce Lease Net Revenues Variance Account balance related to the derivative liability to continue to be recovered on the basis of OPG's expected payments to Bruce Power and associated income tax impacts. Amounts collected from customers for the derivative liability for periods after its reversal are subject to refund in the future and will be recognized as a regulatory liability as part of the Bruce Lease Net Revenues Variance Account.

On October 8, 2015, the OEB issued an order implementing its June 2015 and September 2015 decisions. Reflecting the account balances and recovery periods approved in the decisions, the order authorized OPG to recover \$933 million over the period from October 1, 2015 to December 31, 2016 through the following rate riders for Prescribed Facilities' generation during this period:

(\$/MWh)	Nuclear	Hydroelectric <sup>1</sup>
2015/2016 rate riders	10.84	3.19
2015/2016 interim period rate riders <sup>2</sup>	2.17	0.64
Rate riders for the period from October 1, 2015 to December 31, 2016	13.01	3.83

<sup>1</sup> The rate riders apply to production from all of OPG's regulated hydroelectric facilities.

<sup>2</sup> The interim period rate riders were authorized by the OEB to allow for the recovery of the new riders effective July 1, 2015, resulting in a corresponding revenue accrual for the period from July 1, 2015 to September 30, 2015 during the third quarter of 2015.

The new rate riders are in addition to those authorized by the OEB in its December 2014 order for production from OPG's nuclear and hydroelectric generating stations prescribed for rate regulation prior to 2014, for the period from January 1, 2015 to December 31, 2015. Those rate riders were set at \$1.33/MWh for nuclear generation and \$6.04/MWh for generation from the hydroelectric stations prescribed for rate regulation prior to 2014 and provided for the net recovery of the balances in certain variance accounts as at December 31, 2013, as discussed in Note 5 to these financial statements.

Any shortfall or over-recovery of the approved balances due to differences between actual and forecast production are recorded in the authorized Nuclear Deferral and Variance Over/Under Recovery Variance Account and Hydroelectric Deferral and Variance Over/Under Recovery Variance Account to be collected from, or refunded to customers in the future.

As part of the approved Partial Settlement Agreement, OPG ceased recording interest on the derivative portion of the Bruce Lease Net Revenues Variance Account balance for the period from January 1, 2015 to December 31, 2016.

The OEB's October 2015 order also approved the continuation of previously authorized variance and deferral accounts.