

1 **PENSION AND OTHER POST EMPLOYMENT BENEFIT COSTS**

2 3 **1.0 PURPOSE**

4 The purpose of this exhibit is to:

- 5 • Describe OPG’s proposal to maintain the same treatment for pension and other post-
6 employment benefit (“OPEB”) costs as that resulting from the OEB’s EB-2013-0321
7 Decision With Reasons (“EB-2013-0321 Decision”), pending the outcome of the
8 OEB’s generic consultation on pension and OPEB costs (EB-2015-0040);
- 9 • Detail the forecast test period pension contributions and OPEB benefit payments
10 (“cash amounts”) included in the proposed nuclear revenue requirements; and
- 11 • Present the pension and OPEB amounts for the nuclear facilities determined in
12 accordance with US GAAP (“accrual costs”) as well as the differential between
13 pension and OPEB accrual costs and cash amounts.

14 15 **2.0 OVERVIEW**

16 OPG’s pension and OPEB programs consist of a registered pension plan (“RPP”), a
17 supplementary pension plan, other post-retirement benefits such as group life insurance and
18 health and dental care for pensioners and their dependants, as well as long-term disability
19 (“LTD”) benefits for current employees.¹

20
21 OPG proposes to maintain the same treatment for recovering pension and OPEB costs
22 during the test period as that resulting from the EB-2013-0321 Decision (pp. 87-89), pending
23 the outcome of the OEB’s EB-2015-0040 consultation on pension and OPEB costs. In
24 particular, OPG proposes to include pension and OPEB cash amounts in the test period
25 nuclear revenue requirements, and, for both regulated hydroelectric and nuclear facilities, to
26 record differences between actual and forecast cash amounts in the Pension & OPEB Cash
27 Payment Variance Account, and the difference between actual accrual costs and actual cash
28 amounts in the Pension & OPEB Cash Versus Accrual Differential Deferral Account.

¹ The term “other post-retirement benefits” is used to refer to post employment benefit plans other than the RPP and LTD benefits. Unless otherwise noted, OPEB is used to refer to all post-employment benefits other than the RPP benefits.

1 Consistent with the OEB's findings in EB-2013-0321, OPG is proposing that the future
2 consideration of recovery of the difference between accrual costs and cash amounts for the
3 test period be limited to the outcome of the generic consultation and not be subject to a
4 future prudence review beyond the proceeding for this Application. OPG is providing
5 evidence in this exhibit, Ex. F4-3-1 and elsewhere in the Application to support a review of
6 the forecast accrual costs.

7
8 Forecast pension and OPEB cash amounts attributed to the nuclear facilities for the test
9 period are \$272.0M in 2017, \$280.4M in 2018, \$289.5M in 2019, \$271.3M in 2020 and
10 \$279.9M in 2021. The total difference between pension and OPEB accrual costs and cash
11 amounts is forecast to decrease significantly over the period, from an average of \$230.8M in
12 2014-2015 to \$49.8M by 2021. Pension cash amounts are forecast to exceed accrual costs
13 starting in 2018. Total forecast pension cash amounts for the nuclear facilities are higher
14 than accrual amounts by \$31.5M over the test period, while total forecast OPEB cash
15 amounts are \$434.0M lower than the accrual costs over the test period. On an annual basis,
16 test period pension and OPEB accrual costs and cash amounts are significantly lower than
17 in 2014 and 2015.

18
19 As discussed in Ex. H1-1-1, given that the EB-2015-0040 generic consultation is ongoing,
20 OPG is not proposing to clear amounts accumulated in the Pension & OPEB Cash Versus
21 Accrual Differential Deferral Account since November 1, 2014. OPG is proposing to clear the
22 December 31, 2015 balance in the Pension & OPEB Cash Payment Variance Account.

23
24 Although OPG has aligned its test period proposal for pension and OPEB costs with the
25 OEB's EB-2013-0321 Decision, OPG continues to be of the view that it would be appropriate
26 for OPG to recover its accrual pension and OPEB costs for the following reasons, as set out
27 in detail in OPG's July 31, 2015 submission in the EB-2015-0040 consultation:

- 28 • Using accrual accounting for rate setting ensures that rates reflect the true cost of
29 providing the service during the periods to which the rates relate, which minimizes
30 intergenerational inequity and supports efficient consumption through appropriate
31 price signals;

- 1 • The use of accrual pension and OPEB costs for rate recovery purposes is consistent
2 with financial accounting requirements, which are developed through a transparent
3 and rigorous process with an objective of appropriately attributing costs across
4 periods. The use of financial reporting requirements provides a reliable and verifiable
5 basis to set just and reasonable rates, and minimizes the financial burden of keeping
6 two sets of records;
- 7 • The accrual basis of recovery would provide OPG with revenues on the same basis
8 and in a similar timeframe as the accounting requirement to recognize post-retirement
9 obligations on the company's balance sheet. As such, using the accrual accounting
10 basis for rate-setting would avoid significant adverse financial consequences to OPG
11 (including reductions in net income, write-offs of regulatory asset balances and
12 erosion of shareholder's equity) and corresponding increases in the risks to the
13 shareholder, which are likely to arise if a different basis of recovery is adopted; and
- 14 • Maintaining the recovery of costs on an accrual basis promotes consistency and
15 simplicity and supports period-over-period comparability of results, particularly when
16 that basis was previously applied to set the utility's rates, as is the case for OPG.

17
18 As OPG is proposing that the EB-2013-0321 regulated hydroelectric payment amounts form
19 the starting point for determining the regulated hydroelectric payment amounts for 2017 to
20 2021, pension and OPEB cash amounts and accrual costs for the regulated hydroelectric
21 business are not presented in this exhibit.

22
23 Section 3 presents the cash amounts, accrual costs and the difference between the two for
24 the nuclear facilities for the historical, bridge and test periods. It also further details OPG's
25 proposed treatment of pension and OPEB costs in this Application. Sections 4 and 5,
26 respectively, set out how the cash amounts and accrual costs presented in section 3 were
27 developed and discuss related trends and variances.

28
29 Cash and accrual amounts presented in this Application reflect changes to RPP provisions
30 from the 2015 round of collective bargaining with the Power Workers' Union ("PWU") and

1 The Society of Energy Professionals (“The Society”) and from changes applicable to
2 Management employees (i.e., pension reform), all of which are discussed in Ex. F4-3-1.

3

4 The nature of accrual costs and cash amounts presented in this exhibit and the
5 methodologies used to derive them are unchanged from those reflected in EB-2012-0002,
6 EB-2013-0321 and EB-2014-0370.

7

8 **3.0 PROPOSED TEST PERIOD TREATMENT OF PENSION AND OPEB COSTS**

9 In the EB-2013-0321 Decision, the OEB required OPG to recover cash amounts for pension
10 and OPEB for 2014 and 2015 and established the Pension & OPEB Cash Versus Accrual
11 Differential Deferral Account to record the differential between actual accrual costs and
12 actual cash amounts. The OEB also indicated that it was “not necessarily moving from an
13 accrual to a cash basis for setting OPG’s payment amounts” and that “transition to a different
14 accounting treatment of pensions and OPEBs for OPG, if required, would be addressed by
15 the Board in OPG’s next cost of service proceeding, having been informed by the outcomes
16 of the generic proceeding” (p. 88). The EB-2013-0321 Decision also clarified that “the Board
17 is not setting aside the difference between the cash and accrual amounts for purposes
18 of another future prudence review of these costs”, noting that “any future treatment regarding
19 the deferral account would be limited to the outcomes of the generic proceeding” and that
20 “[b]ased on the policy outcome of the generic proceeding, a future panel will decide on the
21 appropriate disposition (if any) of the deferral account balance.” (pp. 88-89)

22

23 As the EB-2015-0040 generic consultation has not concluded at the time of this Application,
24 consistent with the OEB’s EB-2013-0321 Decision, OPG is seeking to include forecast
25 pension and OPEB cash amounts in the nuclear revenue requirements for the test period.
26 With respect to the regulated hydroelectric facilities, the 2017-2021 hydroelectric payment
27 amounts proposed under a price cap incentive regulation approach would continue to reflect
28 the EB-2013-0321 approved forecast cash amounts.

29

30 Chart 1 below sets out pension and OPEB cash amounts attributed to the nuclear facilities in
31 the historical, bridge and test years. The cash amounts consist of contributions to the RPP

1 and benefit payments to retirees and dependants under the OPEB plans. OPG's total
 2 projected cash amounts for pension and OPEB for 2016-2021 were calculated by an
 3 independent actuary, Aon Hewitt, as shown in Attachment 1. Pension contributions, which
 4 are typically set by triennial actuarial valuations, are projected to decrease after each such
 5 assumed valuation during the test period, effective January 1, 2017 and January 1, 2020, as
 6 discussed in section 4.2. Forecast amounts for pension contributions represent estimated
 7 minimum required company contributions for current service cost and going concern special
 8 payments.² Increasing OPEB benefit payments over the period reflect the growing retiree
 9 population and expected increases in per capita medical and other costs.

10
 11 **Chart 1**

Pension and OPEB Cash Amounts – Nuclear³ (\$M)									
	2013 Actual	2014 Actual	2015 Actual	2016 Projection	2017 Plan	2018 Plan	2019 Plan	2020 Plan	2021 Plan
Pension	231.6	280.9	284.5	283.3	171.1	175.5	180.3	157.2	162.1
OPEB	78.1	84.5	93.1	96.6	100.9	104.9	109.2	114.1	117.8
Total	309.7	365.4	377.6	379.9	272.0	280.4	289.5	271.3	279.9

12
 13 Chart 2 sets out pension and OPEB accrual costs attributed to the nuclear facilities in the
 14 historical, bridge and test years. OPG's total accrual costs for these periods were determined
 15 by Aon Hewitt in accordance with US GAAP, as set out in Attachment 1 for the 2016-2021
 16 projection and Attachment 2 for the 2014-2015 actual amounts.

17
² No solvency special payments are projected for 2016-2021 and none were made in 2013-2015.

³ Nuclear pension and OPEB amounts presented in this exhibit exclude amounts related to the Nuclear Waste Management Organization ("NWMO"), which is consolidated into OPG's financial statements.

1

Chart 2

Total Pension and OPEB Accrual Costs – Nuclear⁴ (\$M)									
	2013 Actual	2014 Actual	2015 Actual	2016 Projection	2017 Plan	2018 Plan	2019 Plan	2020 Plan	2021 Plan
Pension	365.4	411.2	414.4	294.6	222.8	167.5	153.0	140.0	131.4
OPEB	223.0	176.1	202.8	192.6	194.6	195.0	196.0	197.0	198.3
Total	588.4	587.3	617.2	487.2	417.4	362.5	349.0	337.0	329.7

2

3 As set out in section 2.0 and Ex. H1-1-1, OPG proposes to record the difference between
 4 actual accrual costs and actual cash amounts during the test period in the Pension & OPEB
 5 Cash Versus Accrual Differential Deferral Account, and the difference between actual and
 6 forecast cash amounts in the Pension & OPEB Cash Payment Variance Account.
 7 Notwithstanding this proposal in light of the OEB’s ongoing generic consultation on pension
 8 and OPEB, OPG continues to be of the view that it would be appropriate for it to recover
 9 accrual costs for pension and OPEB for the regulated business for reasons summarized in
 10 section 2.0.

11

12 Chart 3 below sets out the difference between pension and OPEB accrual costs and cash
 13 amounts attributed to the nuclear facilities for the historical, bridge and test periods (i.e., the
 14 difference between the amounts in Chart 2 and the amounts in Chart 1). The difference is
 15 expected to decline significantly by the end of the test period. Cash amounts for pension are
 16 expected to exceed accrual costs starting in 2018. This trend reflects lower pension accrual
 17 costs discussed in section 5.3. The OPEB cash-to-accrual difference is projected to decline
 18 gradually over the test period as cash amounts increase.

19

20

⁴ Ibid.

1

Chart 3

Pension and OPEB Accrual-Cash Differential Amounts – Nuclear⁵ (\$M)									
	2013 Actual	2014 Actual	2015 Actual	2016 Projection	2017 Plan	2018 Plan	2019 Plan	2020 Plan	2021 Plan
Pension	133.8	130.3	129.9	11.3	51.7	(8.0)	(27.3)	(17.2)	(30.7)
OPEB	144.9	91.6	109.7	96.0	93.7	90.1	86.8	82.9	80.5
Total	278.7	221.9	239.6	107.3	145.4	82.1	59.5	65.7	49.8

2

3 **3.1 Presentation of Pension and OPEB Costs in the Application**

4 In costing labour for planning, target setting and financial reporting purposes, OPG includes
 5 accrual costs for pension and OPEB in line with US GAAP requirements. Accordingly, OPG's
 6 corporate and business unit business plans, which present financial information in
 7 accordance with US GAAP, reflect accrual costs for pension and OPEB. This Application is
 8 based on OPG's approved 2016-2018 Business Plan and therefore presents business unit
 9 and compensation related cost information on the same basis as the business plan.⁶ In order
 10 to reconcile this presentation with OPG's proposed treatment of pension and OPEB costs in
 11 the test period, a negative adjustment in the amount of the forecast differential between
 12 pension and OPEB accrual costs and cash amounts (shown in Chart 3) is included as a
 13 separate entry in centrally-held costs for the nuclear facilities in each of the test years (Ex.
 14 F4-4-1 Table 3, line 2).

15

16 **4.0 CASH AMOUNTS FOR PENSION AND OPEB**

17 OPG's pension plans are defined benefit pension plans that provide members with a pension
 18 amount based on years of service and salary at retirement. The RPP is funded by member
 19 (i.e., employee) and OPG (i.e., employer) contributions.⁷ The *Pension Benefits Act* (Ontario)
 20 ("PBA") sets the minimum funding requirements for registered pension plans to ensure that

⁵ Although the accrual-to-cash differential is presented starting in 2013 for illustrative purposes, 2014 is the first year for which the OEB set payment amounts on the basis of cash amounts for pension and OPEB. Positive amounts represent excess of accrual costs over cash amounts.

⁶ As in previous proceedings and as discussed in section 5.2, the current service component of accrual costs is largely reflected in costs charged to the business units, while the other components of accrual costs are held centrally and are assigned and allocated to the business units.

⁷ The supplementary pension plan is not funded but is secured by letters of credit.

1 plans have sufficient assets in place to meet existing and future obligations. Contributions
2 must be made to fund the plan's current service cost (also known as normal cost), as well as
3 deficiencies (i.e., deficits), if any, through defined special payments over a period of time.

4
5 The PBA requires actuarial valuations on both going concern and solvency bases to be
6 performed at least once every three years to determine the funded status of a registered
7 pension plan (i.e., the difference between the value of pension fund assets and the actuarial
8 present value of the accrued liability⁸ as of the valuation date) and required future
9 contributions. The going concern valuation measures the financial position of the pension
10 plan assuming that the plan continues indefinitely into the future. The solvency valuation
11 measures the financial position of the pension plan, as defined pursuant to the PBA,
12 assuming that the plan is wound-up on the valuation date and all benefits are settled by
13 either lump sum payments or annuity purchases. To the extent that going concern special
14 payments will not eliminate the solvency deficit over a 5-year period, additional payments
15 towards the solvency deficit (i.e., solvency special payments) are required over the 5-year
16 period. Going concern special payments are made over a 15-year period. Valuations are
17 prepared and certified by an independent actuary and must be filed with the Financial
18 Services Commission of Ontario ("FSCO") and the Canada Revenue Agency ("CRA").

19
20 In determining the going concern accrued liability and current service cost, an actuary
21 attributes the present value of future expected benefits over each plan member's projected
22 service. The obligation at a particular date is the actuarial present value of the benefits
23 attributed to each member's service rendered up to that date. Employer's current service
24 cost represents the actuarial present value of benefits earned in respect of each additional
25 year of employee service, less any required employee contributions to the pension plan.

26
27 In order to establish funding requirements, economic and demographic assumptions are
28 required to determine the plan's accrued liability as of the valuation date and to project
29 current service cost for future years. Examples of economic assumptions include discount
30 rates, inflation rate, and salary escalation rate. Examples of demographic assumptions

⁸ The term "accrued liability" and "benefit obligation" may be used interchangeably in this exhibit.

1 include mortality rates and improvement scale, termination rates, and retirement rates. As
2 discussed below, certain assumptions differ between going concern valuations and solvency
3 valuations. Many of the assumptions used in the going concern funding valuations are also
4 applied in accounting valuations for determining the pension obligation and accrual costs.

5
6 Going concern valuation assumptions and methods are determined by the actuary preparing
7 the valuation, in accordance with accepted actuarial practice and taking into account
8 regulatory and legislative constraints and guidance issued by the Canadian Institute of
9 Actuaries (“CIA”), with input from plan sponsors. As prescribed by the PBA, key assumptions
10 used in the solvency valuation are required to be set in accordance with specific CIA
11 standards of practice.

12
13 The going concern benefit obligation and funding requirements are determined using a
14 discount rate based on the expected long-term rate of return on pension plan assets, taking
15 into account a margin for adverse deviation for some potential barriers to achieving this
16 return. This long-term rate of return is based on the pension fund asset mix and capital
17 market expectations of future risk and return for each asset class within the fund portfolio, net
18 of passive investment management fees.⁹ For the solvency valuation, the discount rates
19 used to determine the benefit obligation are required to be determined in accordance with
20 specific standards of practice issued by the CIA and with reference to government of Canada
21 bonds.¹⁰

22
23 The most recently filed actuarial valuation of OPG’s RPP is as at January 1, 2014. That
24 valuation showed that the pension fund was in a deficit position. Specifically, the RPP was
25 90.5 per cent funded on a going concern basis and 99 per cent funded on a solvency basis.
26 Funding requirements pursuant to the valuation included going concern special payments

⁹ The long-term expected rate of return used for US GAAP accrual accounting purposes is determined in a similar way to the going concern discount rate, with the main differences being that the accounting rate does not take into account either a margin for adverse deviation or an allowance for passive investment management fees.

¹⁰ The solvency discount rates are typically lower than the going concern discount rates, as the solvency rates reflect current government bond yields and annuity purchase rates determined using information provided by insurance companies rather than the rate of return expected to be earned on pension fund assets.

1 (over 15 years), but no solvency special payments.¹¹ In 2014 and 2015, OPG made
2 approximately the minimum required contributions pursuant to the January 1, 2014 valuation
3 and, subject to employee contribution increases discussed in Ex. F4-3-1, is forecasting
4 contributions on the same basis for 2016. The January 1, 2014 valuation was previously
5 filed with the OEB in EB-2013-0321.¹²

6
7 The next actuarial valuation of the OPG RPP is expected to be completed in 2017 using data
8 and assumptions as of January 1, 2017, and must be filed with FSCO and CRA by
9 September 30, 2017. A subsequent valuation would need to be completed as of January 1,
10 2020 at the latest. The test period nuclear revenue requirements reflect projected RPP
11 contributions for the 2017-2021 period as determined by Aon Hewitt. As discussed further in
12 section 4.1, Aon Hewitt prepared this projection based on information available as of
13 December 31, 2015, extrapolating to the assumed January 1, 2017 and January 1, 2020
14 future valuation dates.

15
16 Cash amounts for OPEB reflect OPG's benefit payments to retirees and dependants in
17 accordance with the provisions of the plans. Forecast OPEB payments for the 2016-2021
18 period represent the nuclear portion of total estimated future cash flows used by Aon Hewitt
19 to project OPEB benefit obligations over this period.

20 21 **4.1 Forecasting Pension and OPEB Cash Amounts**

22 Forecasting RPP contributions requires estimating the funded status of the plan as of the
23 date of each assumed future funding valuation. Developing these estimates requires
24 expectations of assumptions that will be used to determine the accrued liability as of these
25 dates, and projections of the actual pension fund performance to those dates. OPG's total
26 projected required RPP contributions for 2017-2021 were calculated by Aon Hewitt, as set
27 out in Attachment 1, by projecting the going concern and solvency funded status of the plan

¹¹ Although the pension plan was less than 100 per cent funded on a solvency basis, there was no requirement for additional solvency funding since the going concern special payments were determined by the valuation to be sufficient to fund the solvency deficit within 5 years.

¹² EB-2013-0321 Ex. J9.6, Attachment 1.

1 as at January 1, 2017 and January 1, 2020 based on year-end 2015 information. These
2 projections are reflected in OPG's approved 2016-2018 Business Plan.

3
4 In order to project the January 1, 2017 and January 1, 2020 benefit obligations, Aon Hewitt
5 applied the January 1, 2014 funding valuation assumptions, subject to certain updates as at
6 year-end 2015.¹³ For the going concern valuation, the main update was a decrease in the
7 discount rate from 5.60 per cent per annum to 5.50 per cent per annum to reflect lower
8 expected long-term returns from pension fund assets based on the pension fund asset
9 allocation and capital market return expectations. For the solvency valuation, the changes
10 were to update the prescribed assumptions, including discount rates as at December 31,
11 2015 and the mortality assumption, which the CIA has now aligned with the
12 recommendations in their February 2014 CIA Final Report: Canadian Pensioners' Mortality.
13 The January 1, 2017 and January 1, 2020 pension asset values were projected by Aon
14 Hewitt based on the actual December 31, 2015 value, at the expected long-term rate of
15 return of 6.0 per cent per annum discussed in section 5.1.¹⁴

16
17 Aon Hewitt's projections of the funded status of the RPP based on year-end 2015 information
18 indicate that the plan will have a minimal going concern deficit as at January 1, 2017, and will
19 be fully funded on both going concern and solvency bases as at January 1, 2020. As such,
20 the projected minimum required pension plan contributions for 2017 to 2019 based on the
21 projected January 1, 2017 valuation comprise employer current service costs and small
22 going concern special payments. The total minimum required contributions for 2020 and
23 2021 based on the projected January 1, 2020 valuation represent the employer's current
24 service cost only. For all years of the projection, the employer's current service cost has
25 been reduced to reflect increases in employee contribution levels discussed in Ex. F4-3-1.

26
27 Projected benefit payments for OPEB plans reflect the cash flows of the underlying
28 accounting benefit obligations discussed in section 5.0.

¹³ Attachment 1, pp. 7-8.

¹⁴ This is the same assumption that was used to project accrual pension costs discussed in section 5.0. The difference between the going concern discount rate of 5.5 per cent and the expected long-term rate of return of 6.0 per cent relates to the factors described in footnote 9.

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As in previous proceedings, total OPG projected RPP contributions and OPEB payments for 2016-2021 were attributed to the nuclear facilities in proportion to the respective benefit costs, which are allocated using the methodology discussed in section 5.2. The resulting cash amounts for the nuclear facilities are presented in Chart 1 above.

4.2 Comparison of Pension and OPEB Cash Amounts

Pension contributions for the nuclear facilities were lower in 2013 relative to the 2014-2016 period primarily due to the higher going concern special payments required pursuant to the January 1, 2014 valuation. Pension contributions are forecasted to decrease in 2017 relative to the 2014-2016 period as the projected January 1, 2017 funding valuation indicates a lower going concern deficit and therefore lower going concern special payments for the 2017-2019 period. As noted above, the going concern special payments are forecasted to be eliminated in the January 1, 2020 valuation. There are no actual or projected solvency special payments during the 2013-2021 period.

OPEB benefit payments increased gradually during the historical period and are expected to continue to increase during the bridge and test periods. This trend reflects a growing retiree population and expected increases in per capita medical and other costs.

Charts 4 below presents the EB-2013-0321 projected (2013) and OEB-approved (2014 and 2015) pension and OPEB cash amounts for the nuclear facilities.

Chart 4

EB-2013-0321 Projected Pension and OPEB Cash Amounts – Nuclear (\$M)			
	2013	2014¹⁵	2015¹⁶
Pension	290.0	277.9	283.4
OPEB	80.9	77.3	82.4
Total	370.9	355.2	365.8

Actual pension contributions for 2013 were lower than projected primarily because OPG did not make an additional, voluntary contribution to the pension plan assumed in the budget. The actual pension contributions for 2014 and 2015 were largely in line with the OEB-approved forecast amounts. Actual OPEB payments for 2013 were close to projected amounts, while the 2014 and 2015 amounts were higher than the OEB-approved forecast, mainly as a result of retirements.

5.0 ACCRUAL COSTS FOR PENSION AND OPEB

As in EB-2013-0321, OPG’s accrual costs for pension and OPEB continue to be determined in accordance with US GAAP and comprise several components. These components are: current service cost (net of required employee contributions for funded plans), interest cost on the benefit obligations at the appropriate discount rate, the expected return on RPP fund assets using an assumed long-term rate of return, amounts for past service costs arising from plan amendments, and amounts for actuarial gains or losses. Actuarial gains and losses consist of experience gains and losses, which arise because actual experience differs from that assumed (e.g., investment experience different than expected or higher or lower inflation

¹⁵ The total of EB-2013-0321 OEB-approved pension and OPEB cash amounts for the nuclear facilities for each of 2014 and 2015 can be re-calculated as follows (subject to rounding): EB-2013-0321 Ex. N2-1-1, Chart 1, “December 31, 2013 Update” lines for Nuclear for each of 2014 and 2015 less EB-2013-0321 Payment Amounts Order, App. A, Table 3a, Note 4, line 1a, col. (a) for 2014 and col. (b) for 2015. The total of 2014 and 2015 OEB-approved nuclear cash amounts for each of pension and OPEB can be re-calculated as follows (subject to rounding): EB-2013-0321 Payment Amounts Order, App G., p. 15, \$23.38M x 24 mos. for pension and \$6.66M x 24 mos. for OPEB.

1 than assumed), and adjustments for changes in assumptions (e.g., discount rates or
2 mortality assumptions¹⁶).

3
4 In accordance with US GAAP, OPG's pension and other post-retirement benefit accrual
5 costs for a given year are based on the measurement of benefit obligations and RPP fund
6 assets at the end of the previous year. As discussed below, the full impact of certain events
7 arising during a year is not charged to pension and OPEB costs for that year; rather, certain
8 amounts are accumulated and amortized over future periods. OPG's LTD costs for the
9 current year are based on the measurement of the benefit obligation at the end of both the
10 current and the previous year, in accordance with US GAAP. The full impact of events arising
11 during a year related to LTD benefits is charged to OPEB costs for that year.

12
13 Similar to the going concern pension funding benefit obligation, the accounting obligations for
14 pension and other post-retirement benefits continue to be determined using the projected
15 benefit method pro-rated on service. Under this method, an equal portion of the total
16 estimated benefit liability is attributed to each year of service until the date the plan
17 participant would be entitled to the full benefit. The obligation at a particular date is the
18 actuarial present value of the benefits attributed to the service rendered up to that date. The
19 LTD obligation continues to be determined using the projected benefit method on a terminal
20 basis. Under this method, the total estimated future benefit is attributed to the year of service
21 in which a disability occurs.

22
23 OPG's pension and OPEB costs and obligations continue to be determined annually by an
24 independent actuary using management's best estimate assumptions, both economic (e.g.,
25 inflation, salary escalation and health care cost trends) and demographic (e.g., mortality
26 rates and improvement scale, termination rates and retirement rates).¹⁷ The long-term
27 inflation assumption is based on the most recent long-term outlook view of the consumer
28 price index, informed by economic forecasts and the Bank of Canada's target range of

¹⁶ There have been no changes to mortality assumptions used to develop OPG's US GAAP based pension and OPEB benefit obligations, from those outlined in EB-2013-0321 Ex. N2-1-1, section 2.2 and EB-2013-0321 Ex. L-6.8-1 Staff-112.

¹⁷ Many of the pension assumptions used for accounting purposes are the same as those used in the actuarial valuations for funding purposes discussed in section 4.0.

1 inflation. The salary escalation rate builds on the long-term inflation assumption, subject to
2 adjustments in the near term for known short-term salary expectations based on collective
3 agreement provisions and other expectations of salary growth. As in EB-2013-0321, the
4 longer term salary escalation rate continues to be equal to the long-term inflation rate plus
5 0.5 per cent.

6
7 In accordance with US GAAP, the discount rates used in determining benefit obligations and
8 accrual costs for pension and OPEB continue to be based on AA corporate bond yields in
9 Canada for the appropriate duration of the benefit obligation. The discount rates used to
10 establish the accrual costs for the historical, bridge and test years were determined using the
11 same approach as in EB-2013-0321.¹⁸

12
13 For purposes of determining pension costs, RPP fund assets continue to be valued using a
14 market-related value of assets. The market-related value used in determining OPG's pension
15 costs recognizes gains and losses on equity assets relative to a six per cent assumed real
16 return over a five-year period. This contributes to the smoothing of impacts from equity
17 market volatility over time. Gains and losses on other than equity assets continue to be
18 recognized in the market-related value of assets immediately.

19
20 The expected long-term rate of return on the RPP fund assets continues to be calculated by
21 Aon Hewitt based on the pension fund asset mix and capital market expectations of future
22 risk and return for each asset class within the fund portfolio.¹⁹

23
24 Actuarial gains and losses for pension and other post-retirement benefits are generally
25 amortized over future periods. In accordance with US GAAP, OPG amortizes the net
26 cumulative unamortized gain or loss for each of these plans in excess of 10 per cent of the
27 greater of the benefit obligation and the market-related value of the plan assets over the
28 expected average remaining service life of the employees (i.e., the "corridor approach.") Past
29 service costs or credits for pension and other post-retirement benefits continue to be

¹⁸ EB-2013-0321 Ex. F4-3-1, section 6.3.3.

¹⁹ See footnote 9.

1 amortized over the expected average remaining service period to full eligibility of the affected
2 employee groups. All actuarial gains and losses and past service costs related to LTD
3 benefits continue to be recognized in the year they arise, in accordance with US GAAP.

4 5 **5.1 Forecasting Pension and OPEB Accrual Costs**

6 Forecasting pension and OPEB accrual costs requires estimating the values of the benefit
7 obligations and pension fund asset value at the end of the year preceding the forecast year.
8 Developing these estimates requires making projections of the actual pension fund
9 performance as well as projections of assumptions that will be used to determine the actual
10 obligations. Forecasting LTD costs also requires estimating the value of the benefit obligation
11 at the end of the last year in the forecast period.

12
13 OPG's total projected pension and OPEB accrual costs for 2016-2021 underpinning this
14 Application were determined by Aon Hewitt using the actual December 31, 2015 values of
15 the benefit obligations and pension fund assets, and the final assumptions as at December
16 31, 2015. The forecast 2017-2021 costs reflect projections of benefit obligations and pension
17 fund assets at the end of each year in the 2016-2020 period using the December 31, 2015
18 final assumptions.²⁰

19
20 Chart 5 below presents the assumptions used to determine OPG's 2013-2015 actual and
21 2016-2021 projected pension and OPEB accrual costs in accordance with US GAAP.²¹

²⁰ As the final December 31, 2015 assumptions were used in the projection, the 2016 pension and OPEB costs are expected to be close to the actual costs for the year with the exception of LTD costs, absent any significant unexpected changes in legislation or OPG's operations. The 2016 LTD cost projections are less definitive because the actual costs will be calculated using information as of year-end 2016.

²¹ Assumptions for 2013 and 2014 were previously presented in EB-2014-0370 Ex. H1-1-1, Chart 1, in accordance with Canadian GAAP. The only assumption difference between US GAAP and Canadian GAAP applicable to OPG's pension and OPEB costs in those years is the use of the year-end discount rate to determine LTD costs under US GAAP rather than the beginning of year discount rate under Canadian GAAP. As such, the LTD discount rate assumptions shown in Chart 5 for 2013 and 2014 differ from those presented in EB-2014-0370.

1
2

Chart 5

Pension and OPEB Accrual Cost Assumptions (rate per annum)					
	2013 Actual ²²	2014 Actual ²²	2015 Actual	2016 Projection ²³	2017-2021 Plan ²³
Discount rate for pension	4.30%	4.90%	4.00%	4.10%	4.10%
Discount rate for other post-retirement benefits	4.40%	5.00%	4.10%	4.20%	4.20%
Discount rate for long-term disability	4.10%	3.30%	3.40%	3.40%	3.40%
Expected long-term rate of return on pension fund assets	6.25%	6.25%	6.25%	6.0%	6.0%
Inflation rate	2.0%	2.0%	2.0%	2.0%	2.0%
Weighted average salary schedule escalation rate ²⁴	2.5%	2.5%	2.0% from Jan 1, 2015 to Dec 31, 2020 and 2.5% thereafter	1.6% from Jan 1, 2016 to Dec 31, 2021 and 2.5% thereafter	1.6% from Jan 1, 2016 to Dec 31, 2021 and 2.5% thereafter
Rate of return used to project year-end pension fund asset values ²⁵	N/A	N/A	N/A	N/A	6.0% in 2016 to 2020

3

4 The actual returns on pension fund assets were 9.2 per cent in 2013, 16.2 per cent in 2014,
 5 and 9.7 per cent in 2015.

²² Except for the LTD discount rate determined at year end, these are the same assumptions used to develop the 2013 and the final 2014 pension and OPEB cost projections presented in EB-2013-0321 (see EB-2013-0321: Ex. F4-3-1, Chart 1 for 2013 and OPG's Argument-in-Chief, p. 97 for 2014).

²³ The assumptions for 2016-2021 can also be found at pp. 6-7 of Aon Hewitt's report in Attachment 1.

²⁴ The weighted average salary schedule escalation rate of 1.6 per cent per year to the end of 2021 reflects assumptions (1.0 per cent per year to the end of 2017 for PWU-represented employees and 1.0 per cent to the end of 2018 for employees represented by The Society) based on current collective agreement provisions discussed in Ex. F4-3-1, and 2.0 per cent per year (i.e., inflation rate) thereafter. The longer term salary schedule escalation (after 2021) is set at the assumed inflation rate plus 0.5 per cent, as in EB-2013-0321.

²⁵ Projections of rates of return to determine year-end pension fund asset values are not required for the calculation of the 2013-2016 costs because the actual prior year-end asset values are known.

1 **5.2 Pension and OPEB Accrual Cost Distribution**

2 A portion of OPG's total pension and OPEB accrual costs continues to be charged to the
3 business units as part of standard labour rates and other direct charges. The portion of the
4 costs that is charged to the business units²⁶ is based on an estimate of the accrual current
5 service cost for pension and OPEB. The remainder of pension and OPEB accrual costs,
6 which includes interest costs on the obligations, the expected return on pension plan assets,
7 amounts for past service costs and actuarial gains and losses, and any current service cost
8 variance from the estimate reflected in standard labour rates and related direct charges to
9 the business units,²⁶ continues to be recorded as a centrally-held cost (line 1 of Ex. F4-4-1
10 Table 1 and Table 3).

11
12 The centrally-held portion of pension and OPEB costs continues to be directly assigned and
13 allocated to the nuclear business unit, in proportion to amounts of pension and OPEB costs
14 charged to the business unit (including amounts assigned and allocated as part of corporate
15 Support Services costs). This methodology was used in EB-2010-0008, EB-2012-0002, EB-
16 2013-0321 and EB-2014-0370. It was reviewed by HSG Group, Inc. in the cost allocation
17 study filed in EB-2013-0321, as well as by Black & Veatch Corporation Inc. in the cost
18 allocation study filed in EB-2010-0008.

19
20 **5.3 Comparison of Pension and OPEB Accrual Costs**

21 Chart 6 below provides a breakdown of the 2013-2021 pension and OPEB costs shown in
22 Chart 2 for the nuclear facilities between amounts charged to the business units and those
23 recorded in centrally held costs. As noted above, OPG is providing in Attachments 1 and 2
24 independent actuarial reports in support of the total OPG forecast 2016-2021 costs and the
25 actual 2014 and 2015 costs, respectively. An actuarial report in support of 2013 actual costs
26 was filed in EB-2014-0370.²⁷

²⁶ Includes pension and OPEB costs assigned and allocated as part of corporate Support Services costs.

²⁷ Refer to EB-2014-0370 Ex. H1-1-2, Attachment 2. Although that report was prepared on a Canadian GAAP basis, the differences from US GAAP accrual costs are limited to LTD costs. These differences were described in EB-2013-0321 Ex. A2-1-1 and EB-2012-0002 Ex. A3-1-2.

1

Chart 6²⁸

Total Pension and OPEB Accrual Costs – Nuclear²⁹ (\$M)									
	2013 Actual	2014 Actual	2015 Actual	2016 Projec- tion	2017 Plan	2018 Plan	2019 Plan	2020 Plan	2021 Plan
Pension – Business Unit Charge	222.2	214.6	218.6	228.6	243.0	230.4	239.0	242.4	244.3
Pension – Centrally Held	143.2	196.6	195.8	66.0	(20.2)	(62.9)	(86.0)	(102.4)	(112.9)
Total Pension Cost	365.4	411.2	414.4	294.6	222.8	167.5	153.0	140.0	131.4
OPEB – Business Unit Charge	77.2	74.2	55.6	58.5	67.8	66.2	67.1	68.1	68.6
OPEB – Centrally Held	145.8	101.9	147.2	134.1	126.8	128.8	128.9	128.9	129.7
Total OPEB Cost	223.0	176.1	202.8	192.6	194.6	195.0	196.0	197.0	198.3
Total Pension and OPEB Costs	588.4	587.3	617.2	487.2	417.4	362.5	349.0	337.0	329.7

2

3

4 Total pension accrual costs for the nuclear facilities increased from 2013 to 2014 primarily
 5 due to the updated mortality assumptions arising from a comprehensive accounting valuation
 6 of pension plan obligations as at December 31, 2013, as discussed in EB-2013-0321³⁰, and
 7 the impact of a lower than expected year-end 2013 pension fund asset value for fixed income
 8 investments. The increase was partially offset by the impact of the higher discount rate as at
 9 December 31, 2013. The pension accrual costs were largely stable in 2015 compared to
 10 2014, primarily as the impact of the lower discount rate as at December 31, 2014 was largely
 11 offset by the impact of a higher than expected year-end 2014 pension fund asset value and
 12 negative expected net growth in cost components during 2015.³¹ Pension costs for the

²⁸ “Business Unit Charge” amounts presented in Chart 6 and Chart 7 are equivalent to amounts labelled “Standard Labour Rate Component” in EB-2013-0321 evidence.

²⁹ See footnote 3.

³⁰ EB-2013-0321: Ex. N-1-1, Ex. N2-1-1 and Ex. L-6.8-1 Staff-112.

³¹ As in previous proceedings, expected net growth (i.e. change) in cost components refers to the impact of changes in current service costs in the normal course, higher interest costs on a higher benefit obligation due to the passage of time, expected changes in the pension asset value, and related changes in amortization of historical actuarial gains or losses.

1 nuclear facilities are projected to decrease significantly over the 2016-2021 period reflecting
2 negative expected net growth in cost components, primarily due to projected increases in the
3 pension asset value and lower amortization of historical net actuarial losses under the
4 corridor approach. The year-over-year decreases in forecast pension costs in 2016 and 2017
5 also reflect increases in employee contributions discussed in Ex. F4-3-1. Additionally, the
6 impact of the slightly higher discount rate at December 31, 2015 and the impact of lower
7 staffing levels contribute to the decrease in the costs in 2016 compared to 2015.

8

9 Total OPEB accrual costs for the nuclear facilities decreased from 2013 to 2014, mainly due
10 to the lower expected per capita health care benefit costs reflected as part of the
11 comprehensive accounting valuation as at December 31, 2013 and the impact of the higher
12 discount rate as at December 31, 2013. The increase in OPEB costs from 2014 to 2015 was
13 primarily due to the decrease in discount rates at December 31, 2014. OPEB costs are
14 forecast to decrease from 2015 to 2016, mainly as a result of the slightly higher discount rate
15 as at December 31, 2015 and lower staffing levels. In the projection for 2017 to 2021, OPEB
16 costs for the nuclear facilities are expected to remain largely stable.

17

18 Chart 7 presents the current service cost component of the total pension and OPEB accrual
19 costs shown in Chart 6. As discussed in section 5.2, total current service cost is comprised of
20 estimated amounts charged to the business units through standard labour rates and other
21 direct charges as well as variances from these estimated amounts, which are included in
22 centrally-held costs. The sum of pension and OPEB current service cost shown in Chart 7 is
23 presented as part of total compensation details at Ex. F4-3-1, Attachment 1, line 45.

24

25

1

Chart 7³²

Pension and OPEB Accrual Current Service Cost – Nuclear³³ (\$M)									
	2013 Actual	2014 Actual	2015 Actual	2016 Projec- tion	2017 Plan	2018 Plan	2019 Plan	2020 Plan	2021 Plan
Pension – Business Unit Charge ³⁴	222.2	214.6	218.6	228.6	243.0	230.4	239.0	242.4	244.3
Pension – Centrally Held	(0.2)	(30.9)	32.0	(9.4)	(18.6)	(9.2)	(12.2)	(15.8)	(18.3)
Total Pension Current Service Cost	222.0	183.7	250.6	219.2	224.4	221.2	226.8	226.6	226.0
OPEB – Business Unit Charge ³⁴	77.2	74.2	55.6	58.5	67.8	66.2	67.1	68.1	68.6
OPEB – Centrally Held	(4.5)	(19.1)	5.1	(0.5)	(9.0)	(8.7)	(10.3)	(11.7)	(12.5)
Total OPEB Current Service Cost	72.7	55.1	60.7	58.0	58.8	57.5	56.8	56.4	56.1
Total Pension and OPEB Current Service Cost	294.7	238.8	311.3	277.2	283.2	278.7	283.6	283.0	282.1

2

3 Pension accrual current service cost for the nuclear facilities was lower in 2014 than in 2013
 4 mainly on account of the higher discount rate as at December 31, 2013, partly offset by the
 5 impact of updated mortality assumptions from the comprehensive accounting valuation of
 6 plan obligations as at December 31, 2013. OPEB accrual current service cost was also lower
 7 in 2014 than in 2013, primarily as a result of the higher discount rate as at December 31,
 8 2013 and lower expected per capita health care benefit costs reflected as part of the
 9 comprehensive accounting valuation. The higher pension and OPEB current service cost in
 10 2015, compared to 2014, reflected a lower discount rate as at December 31, 2014. The lower
 11 pension and OPEB current service cost in 2016 compared to 2015 is mainly due to lower
 12 staffing levels and slightly higher discount rates, and, for pension, increased employee

32 See footnote 28.

33 See footnote 3.

34 As shown in Chart 6.

1 pension plan contributions. The current service cost for both pension and OPEB is largely
2 stable over the test period.

3

4 The split of each year's accrual current service cost between business unit charges³⁵ and
5 centrally-held costs primarily varies with differences between actual and budgeted current
6 service cost amounts, and differences between total estimated payroll for regular employees
7 used to develop standard labour rates and the company's actual payroll.

8

9 **6.0 CONCLUSION**

10 Although OPG continues to be of the view that it is appropriate for it to recover its pension
11 and OPEB costs on an accrual basis, OPG proposes to continue the treatment for pension
12 and OPEB costs adopted by the OEB in the EB-2013-0321 Decision pending the outcome of
13 the OEB's generic consultation on pension and OPEB.

14

15 Both accrual costs and cash amounts for OPG's pension and OPEB plans are projected to
16 decline during the test period. As accrual costs are decreasing at a faster pace, the annual
17 difference between accrual costs and cash amounts is expected to narrow significantly from
18 an average of about \$230M per year in 2014-2015 to just under \$50M by 2021 (for the
19 nuclear facilities). These decreases reflect, among other factors, pension reforms for
20 represented employees achieved through the 2015 round of collective bargaining with direct
21 involvement and support of the Government of Ontario, as well as similar reforms introduced
22 for the Management group. Cash amounts for pension are expected to exceed accrual costs
23 starting in 2018.

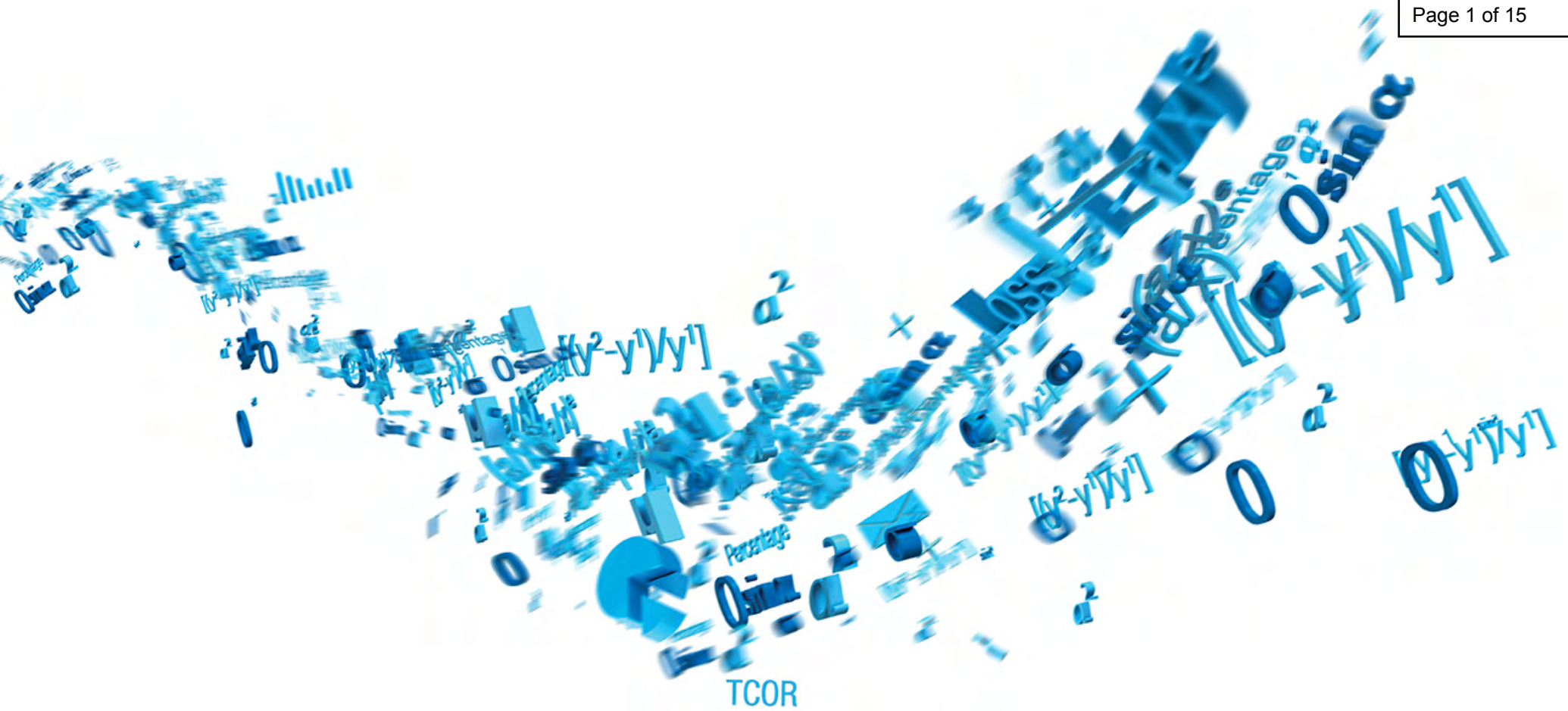
³⁵ Includes pension and OPEB costs assigned and allocated as part of corporate support services costs.

ATTACHMENTS

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- Attachment 1: Aon Hewitt Report on OPG's Estimated Pension and OPEB Costs for 2016-2021
- Attachment 2: Aon Hewitt Report on OPG's Pension and OPEB Costs for 2014 and 2015

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Report on the Estimated Accounting Cost for Post Employment Benefit Plans for
Fiscal Years 2016 to 2021
Ontario Power Generation Inc.
January 1, 2016 to December 31, 2021

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Introduction

This report summarizes the estimated accounting costs for fiscal years 2016 through 2021 for the post employment benefit plans sponsored by Ontario Power Generation Inc. (“OPG”).

This report covers the following plans sponsored by OPG:

- Ontario Power Generation Inc. Pension Plan (“RPP”);
- Ontario Power Generation Inc. Supplementary Pension Plan (“SPP”);
- Non-pension Post Retirement Plan which provides other post retirement benefits (“OPRB”) including retiree medical, dental, life insurance, and retirement bonus benefits; and
- Post Employment Plan which provides long-term disability benefits (“LTD”) including sick leave benefits before LTD begins and the continuation of medical, dental and life insurance while on LTD.

Collectively SPP, OPRB and LTD are known as Other Post Employment Benefits (“OPEB”).

The results cover the fiscal years from January 1, 2016 to December 31, 2021. The results have been developed in accordance with US generally accepted accounting principles (“US GAAP”) under ASC 715, 712 and 710.

The results in this report do not include amounts related to the benefit plans of the Nuclear Waste Management Organization, which are included in OPG’s consolidated financial statements.

Unless otherwise stated all assumptions, data elements, methodologies, plan provisions, and information about assets reflected in this report are the same as those underlying and/or contained in the December 31, 2015 disclosure reports (“the Reports”) prepared by Aon Hewitt in accordance with US GAAP for the post employment benefit plans sponsored by OPG. These disclosure reports were dated March 2016 and are titled as follows:

- US GAAP Accounting Information Non-pension Post-retirement and Post-employment Benefits Plans; and
- US GAAP Accounting Information – Pension Plans.

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Sincerely,

Aon Hewitt Inc.

[Original signed by]

Linda M. Byron
Fellow of the Society of Actuaries
Fellow of the Canadian Institute of Actuaries

May 2016

Aon Hewitt Inc.

[Original signed by]

Gregory W. Durant
Fellow of the Society of Actuaries
Fellow of the Canadian Institute of Actuaries

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Actuarial Report

Results for Fiscal Years 2016 to 2021

OPG's total estimated pension and OPEB costs for fiscal years 2016 through 2021 as determined in accordance with US GAAP are as follows:

All figures are shown in Canadian \$000's.

		US GAAP					
		2016	2017	2018	2019	2020	2021
RPP	\$	367,277	\$ 276,001	\$ 206,870	\$ 188,085	\$ 172,093	\$ 161,479
SPP		22,112	21,750	21,560	21,257	21,151	21,033
OPRB		199,546	201,470	202,065	203,238	205,056	207,160
LTD		<u>18,348</u>	<u>17,715</u>	<u>17,095</u>	<u>16,510</u>	<u>15,965</u>	<u>15,466</u>
Total	\$	607,283	\$ 516,936	\$ 447,590	\$ 429,090	\$ 414,265	\$ 405,138

The estimated 2016 costs for the RPP, SPP and OPRB plans are not expected to change, unless a significant event, such as a curtailment or settlement or other unexpected changes to OPG's operations were to take place prior to December 31, 2016. The final 2016 cost under US GAAP for the LTD plan will be determined at December 31, 2016 based on applicable information and assumptions at that date.

The final 2017 to 2021 costs for all plans under US GAAP will be determined based on applicable information, experience and assumptions in the future.

Further details of the above OPG-wide estimated costs, by plan, as well as OPG's estimated contributions to the RPP fund and benefit payments for OPEB are provided in Schedules 1 through 6 to this report.

Actuarial Methods and Assumptions

The actuarial methodology and accounting policies used in the development of the estimated costs for fiscal years 2016 through 2021 under US GAAP are summarized below.

- Benefit obligations for RPP, SPP and OPRB are determined using the projected benefit method prorated on service;
- Benefit obligations for LTD are determined using the projected benefit method on a terminal basis such that the total estimated future benefit is attributed to the year of service in which a disability occurs;
- The discount rates have been determined in accordance with US GAAP. The discount rates have been set with reference to those representative of AA corporate bond yields in Canada having duration similar to the liabilities of the plans. The December 31, 2015 discount rates were 4.10% per annum for determining the estimated 2016 through 2021 RPP and SPP costs, 4.20% per annum for determining the estimated 2016 through 2021 OPRB costs, and 3.40% per annum for determining the estimated 2016 through 2021 LTD costs. The actual discount rate as at December 31, 2016 will be used to determine the final 2016 LTD cost under US GAAP;
- A building block approach is used in determining the expected long-term rate of return on plan assets. Historical markets are studied and long-term historical relationships between equities and fixed-income are preserved consistent with the widely accepted capital market principle that assets with higher volatility generate a greater return over the long run. Current market factors such as inflation and interest rates are evaluated before long-term capital market assumptions are determined. The long-term portfolio return is established using the fund's asset allocations, via a building block approach with proper consideration of diversification and rebalancing. Aon Hewitt calculated the expected return based on this methodology. An expected rate of return on assets of 6.00% per annum determined using the above approach was used for determining the estimated 2016 through 2021 RPP costs;
- Other actuarial assumptions are management's best estimate of future events, as determined in consultation with us and as set out in the Reports. These assumptions include the inflation rate, which was established at 2.00% for determining 2016 to 2021 costs, and the salary scale increase rate, which was established at 1.00% per annum to end of 2017 for Power Workers' Union ("PWU") represented employees and to the end of 2018 for employees represented by The Society of Energy Professionals ("The Society"), 2.00% per annum to the end of 2021, and 2.50% per annum thereafter (plus Promotion, Progression, Merit for all years). These salary scale increase assumptions for the 2016-2017 period for PWU-represented employees and for the 2016-2018 period for employees represented by The Society are consistent with the provisions of the corresponding collective agreements;
- The active membership headcount is first calculated for each business unit based on the assumed decrements, and then compared to the estimated active December 31, 2016 to December 31, 2021 headcounts for each business unit. If the calculated headcounts exceed the estimated headcounts at year-end, additional employees are assumed to retire or terminate to reduce the headcounts. Conversely, new

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entrants are assumed to be added to the plan in order to achieve anticipated headcounts, if the calculated headcounts are lower than the estimated headcounts at year-end. The estimated December 31, 2016 to December 31, 2021 active headcounts used are as follows:

	2016	2017	2018	2019	2020	2021
Nuclear	6,185	6,237	6,229	6,179	6,048	5,978
Hydro / Thermal	1,517	1,469	1,447	1,406	1,389	1,358
Support Services	<u>2,101</u>	<u>2,068</u>	<u>2,043</u>	<u>2,026</u>	<u>2,001</u>	<u>1,994</u>
Total	9,803	9,774	9,719	9,611	9,438	9,330

- Actuarial gains or losses for RPP, SPP and OPRB have been amortized using the 10% corridor method, except where immediate recognition is required under US GAAP for non-routine events during the year (none expected during 2016 through 2021);
- Past service costs for RPP, SPP and OPRB have been amortized on a straight-line basis over the expected average remaining service lifetime at the amendment date, except where immediate recognition is required under US GAAP during the year (none expected during 2016 through 2021);
- For LTD, all actuarial gains and losses and past service costs are required to be recognized immediately in the cost. Therefore, under US GAAP, the cost is equal to the change in the benefit obligation plus benefit payments; and
- Expected return on assets and amortization of actuarial gains/losses are based on a market-related value of assets where investment gains and losses on equity assets in excess of an expected return of 6.0% per annum plus the increase in Consumer Price Index are smoothed over five years.

The 2016 contributions to the RPP fund are based on the latest actuarial valuation as of January 1, 2014 for funding purposes of the RPP, updated to reflect increases in required member contributions coming into effect for represented and non-represented members during 2016. The next actuarial valuation for funding purposes must have an effective date no later than January 1, 2017. We have assumed that based on a triennial filing, the subsequent actuarial valuation for funding purposes would have an effective date of January 1, 2020.

In order to project contributions to the RPP for 2017 to 2021, an estimate of the going concern and solvency positions of the RPP is required. The contributions for 2017 to 2019 are estimated based on the projected going concern and solvency funded status as of January 1, 2017. The estimated contributions for 2020 to 2021 are based on the projected going concern and solvency funded status as of January 1, 2020, Contributions during the period 2017 to 2021 reflect increases in required member contributions coming into effect during that period for represented and non-represented members. All assumptions used for the determination of the projected going concern funded status are the

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same as those used for the funding valuation as of January 1, 2014¹, updated to reflect a discount rate of 5.50% per annum which reflects lower expected returns from pension fund assets determined using our capital market expectation model based on the pension fund's asset allocation.

All assumptions used for the determination of the projected solvency funded status are the same as those used for the funding valuation as at January 1, 2014, updated to reflect the following prescribed assumptions:

- The non-indexed discount rates are 2.10% per annum for the first 10 years and 3.70% per annum thereafter for commuted values, and 3.20% per annum for annuity purchases. The indexed discount rates for commuted values are 1.30% per annum for the first 10 years and 1.80% per annum thereafter; and
- The mortality assumption is per the 2014 Canadian Pensioners' Mortality Table combined with the Canadian Pensioners Mortality Improvement Scale B (CPM-B), both as published in the February 2014 CIA Final Report: Canadian Pensioners' Mortality.

The projected benefit payments for the OPEB plans reflect the estimated cashflows of the underlying benefit obligations.

¹ Includes application of the January 1, 2014 valuation 3-year salary scale assumption as at January 1, 2017.

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Schedule 1—Summary of Estimated 2016 US GAAP Results

The following table provides a summary of the estimated US GAAP results for 2016 for the post employment benefit plans sponsored by OPG. The estimated net periodic pension/benefit cost for the period January 1, 2016 to December 31, 2016 is determined based on the balance sheet items at January 1, 2016.

(in Canadian \$000's)	RPP	SPP	OPRB	LTD
Net Asset (Liability) Recognized as at January 1, 2016				
Projected Benefit Obligation	\$ (15,404,062)	\$ (295,295)	\$ (2,914,927)	\$ (259,900)
Fair Value of Plan Assets	<u>13,072,299</u>	<u>0</u>	<u>0</u>	<u>0</u>
Net Asset (Liability) Recognized	\$ (2,331,763)	\$ (295,295)	\$ (2,914,927)	\$ (259,900)
Amounts Recognized in Accumulated Other Comprehensive Income as at January 1, 2016				
Unrecognized Past Service Costs (Credits)	\$ 0	\$ 0	\$ 5,851	\$ 0
Unrecognized Net Actuarial Loss (Gain)	<u>3,017,663</u>	<u>77,532</u>	<u>537,802</u>	<u>0</u>
Total Accumulated Other Comprehensive Loss (Income)	\$ 3,017,663	\$ 77,532	\$ 543,653	\$ 0
Components of Estimated Net Periodic Pension/Benefit Cost, January 1, 2016 to December 31, 2016				
Employer Current Service Cost	\$ 273,247	\$ 6,092	\$ 56,497	\$ 9,647
Interest Cost	630,810	11,986	123,223	8,701
Expected Return on Plan Assets	(728,898)	0	0	0
Amortization of Past Service Cost	0	0	583	0
Amortization of Net (Gain) Loss	<u>192,118</u>	<u>4,034</u>	<u>19,243</u>	<u>0</u>
Total Cost	\$ 367,277	\$ 22,112	\$ 199,546	\$ 18,348
2016 Estimated Employer Pension Contributions / Benefit Payments	\$ 353,316	\$ 18,107	\$ 75,094	\$ 27,280

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Schedule 2—Summary of Estimated 2017 US GAAP Results

The following table provides a summary of the estimated US GAAP results for 2017 for the post employment benefit plans sponsored by OPG. The estimated net periodic pension/benefit cost for the period January 1, 2017 to December 31, 2017 is determined based on the projected balance sheet items at January 1, 2017.

(in Canadian \$000's)	RPP	SPP	OPRB	LTD
Projected Net Asset (Liability) Recognized as at January 1, 2017				
Projected Benefit Obligation	\$ (15,724,926)	\$ (295,266)	\$ (3,019,658)	\$ (250,968)
Fair Value of Plan Assets	<u>13,619,630</u>	<u>0</u>	<u>0</u>	<u>0</u>
Net Asset (Liability) Recognized	\$ (2,105,296)	\$ (295,266)	\$ (3,019,658)	\$ (250,968)
Estimated Amounts Recognized in Accumulated Other Comprehensive Income as at January 1, 2017				
Unrecognized Past Service Costs (Credits)	\$ 0	\$ 0	\$ 5,268	\$ 0
Unrecognized Net Actuarial Loss (Gain)	<u>2,777,235</u>	<u>73,498</u>	<u>518,664</u>	<u>0</u>
Total Accumulated Other Comprehensive Loss (Income)	\$ 2,777,235	\$ 73,498	\$ 523,932	\$ 0
Components of Estimated Net Periodic Pension/Benefit Cost, January 1, 2017 to December 31, 2017				
Employer Current Service Cost	\$ 277,972	\$ 6,194	\$ 57,285	\$ 9,316
Interest Cost	643,048	11,981	127,550	8,399
Expected Return on Plan Assets	(778,316)	0	0	0
Amortization of Past Service Cost	0	0	583	0
Amortization of Net (Gain) Loss	<u>133,297</u>	<u>3,575</u>	<u>16,052</u>	<u>0</u>
Total Cost	\$ 276,001	\$ 21,750	\$ 201,470	\$ 17,715
2017 Estimated Employer Pension Contributions / Benefit Payments	\$ 211,838	\$ 18,469	\$ 80,053	\$ 26,514

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Schedule 3—Summary of Estimated 2018 US GAAP Results

The following table provides a summary of the estimated US GAAP results for 2018 for the post employment benefit plans sponsored by OPG. The estimated net periodic pension/benefit cost for the period January 1, 2018 to December 31, 2018 is determined based on the projected balance sheet items at January 1, 2018.

(in Canadian \$000's)	RPP	SPP	OPRB	LTD
Projected Net Asset (Liability) Recognized as at January 1, 2018				
Projected Benefit Obligation	\$ (16,072,677)	\$ (294,972)	\$ (3,123,933)	\$ (242,169)
Fair Value of Plan Assets	<u>13,998,249</u>	<u>0</u>	<u>0</u>	<u>0</u>
Net Asset (Liability) Recognized	\$ (2,074,428)	\$ (294,972)	\$ (3,123,933)	\$ (242,169)
Estimated Amounts Recognized in Accumulated Other Comprehensive Income as at January 1, 2018				
Unrecognized Past Service Costs (Credits)	\$ 0	\$ 0	\$ 4,685	\$ 0
Unrecognized Net Actuarial Loss (Gain)	<u>2,682,204</u>	<u>69,923</u>	<u>502,105</u>	<u>0</u>
Total Accumulated Other Comprehensive Loss (Income)	\$ 2,682,204	\$ 69,923	\$ 506,790	\$ 0
Components of Estimated Net Periodic Pension/Benefit Cost, January 1, 2018 to December 31, 2018				
Employer Current Service Cost	\$ 273,168	\$ 6,307	\$ 55,676	\$ 8,989
Interest Cost	654,686	11,966	131,753	8,106
Expected Return on Plan Assets	(817,206)	0	0	0
Amortization of Past Service Cost	0	0	583	0
Amortization of Net (Gain) Loss	<u>96,222</u>	<u>3,287</u>	<u>14,053</u>	<u>0</u>
Total Cost	\$ 206,870	\$ 21,560	\$ 202,065	\$ 17,095
2018 Estimated Employer Pension Contributions / Benefit Payments	\$ 216,704	\$ 18,838	\$ 85,255	\$ 25,470

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Schedule 4—Summary of Estimated 2019 US GAAP Results

The following table provides a summary of the estimated US GAAP results for 2019 for the post employment benefit plans sponsored by OPG. The estimated net periodic pension/benefit cost for the period January 1, 2019 to December 31, 2019 is determined based on the balance sheet items at January 1, 2019.

(in Canadian \$000's)	RPP	SPP	OPRB	LTD
Projected Net Asset (Liability) Recognized as at January 1, 2019				
Projected Benefit Obligation	\$ (16,335,705)	\$ (294,407)	\$ (3,225,414)	\$ (233,794)
Fair Value of Plan Assets	<u>14,282,869</u>	<u>0</u>	<u>0</u>	<u>0</u>
Net Asset (Liability) Recognized	\$ (2,052,836)	\$ (294,407)	\$ (3,225,414)	\$ (233,794)
Estimated Amounts Recognized in Accumulated Other Comprehensive Income as at January 1, 2019				
Unrecognized Past Service Costs (Credits)	\$ 0	\$ 0	\$ 4,102	\$ 0
Unrecognized Net Actuarial Loss (Gain)	<u>2,670,446</u>	<u>66,636</u>	<u>487,359</u>	<u>0</u>
Total Accumulated Other Comprehensive Loss (Income)	\$ 2,670,446	\$ 66,636	\$ 491,461	\$ 0
Components of Estimated Net Periodic Pension/Benefit Cost, January 1, 2019 to December 31, 2019				
Employer Current Service Cost	\$ 278,903	\$ 6,433	\$ 54,681	\$ 8,678
Interest Cost	666,847	11,941	135,855	7,832
Expected Return on Plan Assets	(840,623)	0	0	0
Amortization of Past Service Cost	0	0	583	0
Amortization of Net (Gain) Loss	<u>82,958</u>	<u>2,883</u>	<u>12,119</u>	<u>0</u>
Total Cost	\$ 188,085	\$ 21,257	\$ 203,238	\$ 16,510
2019 Estimated Employer Pension Contributions / Benefit Payments	\$ 221,692	\$ 19,215	\$ 90,910	\$ 24,257

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Schedule 5—Summary of Estimated 2020 US GAAP Results

The following table provides a summary of the estimated US GAAP results for 2020 for the post employment benefit plans sponsored by OPG. The estimated net periodic pension/benefit cost for the period January 1, 2020 to December 31, 2020 is determined based on the balance sheet items at January 1, 2020.

(in Canadian \$000's)	RPP	SPP	OPRB	LTD
Projected Net Asset (Liability) Recognized as at January 1, 2020				
Projected Benefit Obligation	\$ (16,646,750)	\$ (293,566)	\$ (3,323,905)	\$ (226,047)
Fair Value of Plan Assets	<u>14,647,094</u>	<u>0</u>	<u>0</u>	<u>0</u>
Net Asset (Liability) Recognized	\$ (1,999,656)	\$ (293,566)	\$ (3,323,905)	\$ (226,047)
Estimated Amounts Recognized in Accumulated Other Comprehensive Income as at January 1, 2020				
Unrecognized Past Service Costs (Credits)	\$ 0	\$ 0	\$ 3,519	\$ 0
Unrecognized Net Actuarial Loss (Gain)	<u>2,650,873</u>	<u>63,753</u>	<u>474,105</u>	<u>0</u>
Total Accumulated Other Comprehensive Loss (Income)	\$ 2,650,873	\$ 63,753	\$ 477,624	\$ 0
Components of Estimated Net Periodic Pension/Benefit Cost, January 1, 2020 to December 31, 2020				
Employer Current Service Cost	\$ 278,643	\$ 6,561	\$ 54,332	\$ 8,391
Interest Cost	678,648	11,903	139,841	7,574
Expected Return on Plan Assets	(862,245)	0	0	0
Amortization of Past Service Cost	0	0	539	0
Amortization of Net (Gain) Loss	<u>77,047</u>	<u>2,687</u>	<u>10,344</u>	<u>0</u>
Total Cost	\$ 172,093	\$ 21,151	\$ 205,056	\$ 15,965
2020 Estimated Employer Pension Contributions / Benefit Payments	\$ 193,346	\$ 19,599	\$ 97,362	\$ 23,326

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Schedule 6—Summary of Estimated 2021 US GAAP Results

The following table provides a summary of the estimated US GAAP results for 2021 for the post employment benefit plans sponsored by OPG. The estimated net periodic pension/benefit cost for the period January 1, 2021 to December 31, 2021 is determined based on the balance sheet items at January 1, 2021.

(in Canadian \$000's)	RPP	SPP	OPRB	LTD
Projected Net Asset (Liability) Recognized as at January 1, 2021				
Projected Benefit Obligation	\$ (16,929,550)	\$ (292,431)	\$ (3,419,351)	\$ (218,686)
Fair Value of Plan Assets	<u>14,956,659</u>	<u>0</u>	<u>0</u>	<u>0</u>
Net Asset (Liability) Recognized	\$ (1,972,891)	\$ (292,431)	\$ (3,419,351)	\$ (218,686)
Estimated Amounts Recognized in Accumulated Other Comprehensive Income as at January 1, 2021				
Unrecognized Past Service Costs (Credits)	\$ 0	\$ 0	\$ 2,980	\$ 0
Unrecognized Net Actuarial Loss (Gain)	<u>2,645,361</u>	<u>61,066</u>	<u>462,396</u>	<u>0</u>
Total Accumulated Other Comprehensive Loss (Income)	\$ 2,645,361	\$ 61,066	\$ 465,376	\$ 0
Components of Estimated Net Periodic Pension/Benefit Cost, January 1, 2021 to December 31, 2021				
Employer Current Service Cost	\$ 277,673	\$ 6,693	\$ 54,112	\$ 8,118
Interest Cost	689,795	11,854	143,716	7,348
Expected Return on Plan Assets	(880,396)	0	0	0
Amortization of Past Service Cost	0	0	539	0
Amortization of Net (Gain) Loss	<u>74,407</u>	<u>2,486</u>	<u>8,793</u>	<u>0</u>
Total Cost	\$ 161,479	\$ 21,033	\$ 207,160	\$ 15,466
2021 Estimated Employer Pension Contributions / Benefit Payments	\$ 199,146	\$ 19,991	\$ 103,326	\$ 21,400

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Report on the Accounting Cost for Post Employment Benefit Plans For Fiscal Years 2014 and 2015

Ontario Power Generation Inc.
January 1, 2014 to December 31, 2015

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Introduction

This report summarizes the accounting costs for fiscal years 2014 and 2015 for the post employment benefit plans sponsored by Ontario Power Generation Inc. (“OPG”). In addition, Aon Hewitt prepared this report to provide an independent actuary’s confirmation of information for the post employment benefit plans sponsored by OPG in relation to the December 31, 2015 balances in OPG’s Pension & OPEB Cash Versus Accrual Differential Deferral Account and the Pension & OPEB Cash Payment Variance Account established by the Ontario Energy Board (“OEB”). We understand that this report is expected to be filed with the OEB.

This report covers the following plans sponsored by OPG:

- Ontario Power Generation Inc. Pension Plan (“RPP”);
- Ontario Power Generation Inc. Supplementary Pension Plan (“SPP”);
- Non-pension Post Retirement Plan which provides other post retirement benefits (“OPRB”) including retiree medical, dental, life insurance, and retirement bonus benefits, and
- Post Employment Plan which provides long-term disability benefits (“LTD”) including sick leave benefits before LTD begins and the continuation of medical, dental and life insurance while on LTD.

Collectively SPP, OPRB and LTD are known as Other Post Employment Benefits (“OPEB”).

The results cover the fiscal years from January 1, 2014 to December 31, 2014 and from January 1, 2015 to December 31, 2015. The results have been developed in accordance with US generally accepted accounting principles (“US GAAP”) under ASC 715, 712 and 710.

The results in this report do not include amounts related to the benefit plans of the Nuclear Waste Management Organization, which are included in OPG’s consolidated financial statements.

Unless otherwise stated, all assumptions, data elements, methodologies, plan provisions, and information about assets reflected in this report are the same as those underlying and/or contained in the December 31, 2014 or the December 31, 2015 disclosure reports (“the Reports”) prepared by Aon Hewitt in accordance with US GAAP for the post employment benefit plans sponsored by OPG. These disclosure reports were dated February 2015 and March 2016, respectively, and are titled as follows:

- US GAAP Accounting Information Non-pension Post-retirement and Post-employment Benefits Plans; and
- US GAAP Accounting Information – Pension Plans.

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Sincerely,

Aon Hewitt Inc.

[Original signed by]

Linda M. Byron
Fellow of the Society of Actuaries
Fellow of the Canadian Institute of Actuaries

May 2016

Aon Hewitt Inc.

[Original signed by]

Gregory W. Durant
Fellow of the Society of Actuaries
Fellow of the Canadian Institute of Actuaries

Actuarial Report

Results for 2014 and 2015

This report confirms OPG's total actual pension and OPEB costs for the period from January 1, 2014 to December 31, 2015, as determined in accordance with US GAAP, are as follows:

(in Canadian \$ 000's)	January 1 to October 31, 2014	November 1 to December 31, 2014	Total for January 1 to December 31, 2014	January 1 to December 31, 2015
RPP	\$ 439,303	\$ 87,861	\$ 527,164	\$ 523,447
SPP	21,532	4,306	25,838	25,332
OPRB	150,546	30,109	180,655	206,799
LTD	<u>18,670</u>	<u>444</u>	<u>19,114</u>	<u>24,096</u>
Total	\$ 630,051	\$ 122,720	\$ 752,771	\$ 779,674

Further details of the OPG-wide costs provided above, by plan, as well as OPG's actual contributions to the RPP fund and benefit payments for OPEB for the periods from January 1, 2014 to December 31, 2015 are provided in Schedules 1 and 2 to this report.

The above pension and OPRB costs for the period January 1 to October 31, 2014 are the same as those previously reported by us in the following report in support of the balance in OPG's Pension and OPEB Cost Variance Account established by the OEB, which was filed by OPG with the OEB under case number EB-2014-0370:

- "Report on the Accounting Cost for Post Employment Benefit Plans in Support of Pension and OPEB Cost Variance Account Calculations – Fiscal Year 2013 and the Period from January 1 to October 31, 2014" dated February 2015.

Up to October 31, 2014, the Pension and OPEB Cost Variance Account recorded the difference between actual pension and OPEB costs under Canadian GAAP for OPG's regulated operations and related tax impacts, and those reflected in the regulated prices established by the OEB under case number EB-2010-0008.

In its November 2014 decision under case number EB-2013-0321, the OEB established the Pension & OPEB Cash Versus Accrual Differential Deferral Account and the Pension & OPEB Cash Payment Variance Account for OPG's nuclear and regulated hydroelectric businesses, effective November 1, 2014. Additions to the Pension & OPEB Cash Versus Accrual Differential Deferral Account for the period from November 1, 2014 to December 31, 2015 were calculated by OPG by comparing the portion of the above November 1, 2014 to December 31, 2015 OPG-wide US GAAP costs attributed to OPG's nuclear and regulated hydroelectric businesses to the regulated businesses' portion of OPG's total actual contribution to the RPP fund and actual benefit payments under OPEB plans for the corresponding periods, (which are found in Schedules 1 and 2

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to this report). Additions to the Pension & OPEB Cash Payment Variance Account for the period from November 1, 2014 to December 31, 2015 were calculated by OPG by comparing the regulated businesses' portion of the actual contribution to the RPP fund and actual benefit payments under OPEB plans to such forecast amounts included in the regulated prices established by the OEB under case number EB-2013-0321.

The balances of the Pension & OPEB Cash Versus Accrual Differential Deferral Account and the Pension & OPEB Cash Payment Variance Account calculated and recorded by OPG as at December 31, 2015 are \$315 million and \$28 million to be recovered from ratepayers, respectively, as reported in the audited schedule of regulatory balances as at December 31, 2015, prepared by OPG for filing with the OEB, and dated April 7, 2016.

Actuarial Methods and Assumptions

Aon Hewitt confirms that the OPG-wide costs for the years ended December 31, 2014 (including specifically the period from November 1, 2014 to December 31, 2014) and December 31, 2015 were determined using the actuarial methodology and accounting standards described below. We furthermore confirm that the methodology under US GAAP is consistent with the methodology outlined in OPG's application to the OEB under case number EB-2013-0321 and used to determine the forecast of OPG-wide pension and OPEB costs for the 2014-2015 period, which were presented by OPG in that proceeding through the filing of our report on these costs dated March 2014 and titled "Update to Report on the Estimated Accounting Cost for Post Employment Benefit Plans for Fiscal Years 2014 to 2015".

- Benefit obligations for RPP, SPP and OPRB are determined using the projected benefit method prorated on service;
- Benefit obligations for LTD are determined using the projected benefit method on a terminal basis such that the total estimated future benefit is attributed to the year of service in which a disability occurs;
- The discount rates have been determined in accordance with US GAAP. The discount rates have been set with reference to those representative of AA corporate bond yields in Canada having a duration similar to the liabilities of the plans. The discount rates for determining the 2014 costs (including the period from November 1, 2014 to December 31, 2014) were 4.90% per annum for RPP and SPP, 5.00% per annum for OPRB, and 3.30% per annum for LTD. The discount rates for determining the 2015 costs were 4.00% per annum for RPP and SPP, 4.10% per annum for OPRB, and 3.40% per annum for LTD.
- A building block approach is used in determining the expected long-term rate of return on plan assets. Historical markets are studied and long-term historical relationships between equities and fixed-income are preserved consistent with the widely accepted capital market principle that assets with higher volatility generate a greater return over the long run. Current market factors such as inflation and interest rates are evaluated before long-term capital market assumptions are determined. The long-term portfolio return is established using the fund's asset allocations, via a building block approach with proper consideration of diversification and rebalancing. Aon Hewitt calculated the expected return based on this methodology. An expected rate of return on assets of 6.25% per annum determined using the above approach was used for determining the 2014 and 2015 RPP costs;
- The best estimate assumptions for base mortality rates reflect OPG's actual experience derived from OPG's historical pensioner data. Starting with 2014 costs, the assumed mortality improvement rates were updated to reflect the improvement scale (CPM-B) developed by the Canadian Institute of Actuaries ("CIA") and published in the February 2014 CIA Final Report: Canadian Pensioners' Mortality;

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- Other actuarial assumptions are management's best estimate of future events, as determined in consultation with us and as set out in the Reports. These assumptions include the inflation rate and the salary scale increase rate, which were established at 2.00% per annum and 2.50% per annum (plus Promotion, Progression, Merit), respectively, in determining the 2014 costs. For 2015 costs, the inflation rate was set at 2.00%, and the salary scale increase rate was set at 2.00% per annum for the first six years and 2.50% per annum thereafter (plus Promotion, Progression, Merit in all years);
- Actuarial gains or losses for RPP, SPP and OPRB have been amortized using the 10% corridor method, except where immediate recognition is required under US GAAP for non-routine events during the year (none during 2014 and 2015);
- Past service costs for RPP, SPP and OPRB have been amortized on a straight-line basis over the expected average remaining service lifetime at the amendment date, except where immediate recognition is required under US GAAP for non-routine events during the year (none during 2014 and 2015);
- For LTD, all actuarial gains and losses and past service costs are required to be recognized immediately in the cost. Therefore, under US GAAP, the cost is equal to the change in the benefit obligation plus benefit payments; and
- Expected return on assets and amortization of actuarial gains/losses are based on a market-related value of assets where investment gains and losses on equity assets in excess of an expected return of 6.0% per annum plus the increase in Consumer Price Index are smoothed over five years.

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Schedule 1—Summary of 2014 US GAAP Results

The following table provides a summary of US GAAP results for 2014 for the post employment benefit plans sponsored by OPG. The net periodic pension/benefit cost for this period was determined based on the balance sheet items at January 1, 2014.

(in Canadian \$ 000s)	RPP	SPP	OPRB	LTD
Net Asset (Liability) Recognized as at January 1, 2014				
Projected Benefit Obligation	\$ (13,368,826)	\$ (285,169)	\$ (2,439,305)	\$ (267,830)
Fair Value of Plan Assets	<u>10,893,428</u>	<u>0</u>	<u>0</u>	<u>0</u>
Net Asset (Liability) Recognized	\$ (2,475,398)	\$ (285,169)	\$ (2,439,305)	\$ (267,830)
Amounts Recognized in Accumulated Other Comprehensive Income as at January 1, 2014				
Unrecognized Past Service Costs (Credits)	0	0	950	0
Unrecognized Net Actuarial Loss (Gain)	<u>3,492,617</u>	<u>78,721</u>	<u>319,518</u>	<u>0</u>
Total Accumulated Other Comprehensive Loss (Income)	\$ 3,492,617	\$ 78,721	\$ 320,468	\$ 0
Components of Net Periodic Pension/Benefit Cost, January 1, 2014 to December 31, 2014				
Employer Current Service Cost	\$ 235,496	\$ 7,437	\$ 51,620	\$ 11,517
Interest Cost	655,696	14,110	122,963	10,887
Expected Return on Plan Assets	(624,026)	0	0	0
Recognition of LTD Actuarial (Gain) Loss	0	0	0	(3,290)
Amortization of Past Service Cost (Credit)	0	0	120	0
Amortization of Net (Gain) Loss	<u>259,998</u>	<u>4,291</u>	<u>5,952</u>	<u>0</u>
Total Cost (Annual)	\$ 527,164	\$ 25,838	\$ 180,655	\$ 19,114
Total Cost (January to October)	\$ 439,303	\$ 21,532	\$ 150,546	\$ 18,670
Total Cost (November to December)	\$ 87,861	\$ 4,306	\$ 30,109	\$ 444
2014 Estimated Employer Pension Contributions / Benefit Payments				
Annual amounts used for developing net periodic pension/benefit costs	\$ 400,000	\$ 9,278	\$ 63,336	\$ 27,644
2014 Actual Employer Pension Contributions / Benefit Payments				
Annual	\$ 360,000	\$ 15,690	\$ 66,456	\$ 26,317
January to October	300,000	12,804	53,788	18,355
November to December	60,000	2,886	12,668	7,962

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Schedule 2—Summary of 2015 US GAAP Results

The following table provides a summary of US GAAP results for 2015 for the post employment benefit plans sponsored by OPG. The net periodic pension/benefit cost for this period was determined based on the balance sheet items at January 1, 2015.

(in Canadian \$ 000s)	RPP	SPP	OPRB	LTD
Net Asset (Liability) Recognized as at January 1, 2015				
Projected Benefit Obligation	\$ (15,601,615)	\$ (313,377)	\$ (2,866,895)	\$ (260,627)
Fair Value of Plan Assets	<u>12,328,171</u>	<u>0</u>	<u>0</u>	<u>0</u>
Net Asset (Liability) Recognized	\$ (3,273,444)	\$ (313,377)	\$ (2,866,895)	\$ (260,627)
Amounts Recognized in Accumulated Other Comprehensive Income as at January 1, 2015				
Unrecognized Past Service Costs (Credits)	0	0	830	0
Unrecognized Net Actuarial Loss (Gain)	<u>4,123,499</u>	<u>96,781</u>	<u>633,029</u>	<u>0</u>
Total Accumulated Other Comprehensive Loss (Income)	\$ 4,123,499	\$ 96,781	\$ 633,859	\$ 0
Components of Net Periodic Pension/Benefit Cost, January 1, 2015 to December 31, 2015				
Employer Current Service Cost	\$ 316,533	\$ 7,158	\$ 60,943	\$ 8,601
Interest Cost	626,909	12,628	118,678	8,450
Expected Return on Plan Assets	(711,656)	0	0	0
Recognition of LTD Actuarial (Gain) Loss	0	0	0	7,045
Amortization of Past Service Cost (Credit)	0	0	120	0
Amortization of Net (Gain) Loss	<u>291,661</u>	<u>5,546</u>	<u>27,058</u>	<u>0</u>
Total Cost	\$ 523,447	\$ 25,332	\$ 206,799	\$ 24,096
2015 Estimated Employer Pension Contributions / Benefit Payments	\$ 364,000	\$ 9,678	\$ 66,521	\$ 26,334
Amounts used for developing net periodic pension/benefit cost				
2015 Actual Employer Pension Contributions / Benefit Payments	\$ 359,292	\$ 24,165	\$ 68,561	\$ 24,823

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