

1 **BASE OM&A - REGULATED HYDROELECTRIC**

2 3 **1.0 PURPOSE**

4 This evidence presents the regulated hydroelectric base OM&A costs for the historical
5 period, bridge year and test period.

6 7 **2.0 OVERVIEW**

8 This evidence supports the approval sought for the proposed regulated hydroelectric base
9 OM&A for the test period. The regulated hydroelectric base OM&A expenses for 2010 - 2015
10 are provided in Ex. F1-2-1 Table 1. The test period base OM&A expenses for the Niagara
11 Plant Group and R.H. Saunders GS are \$143.2M (\$74.6M in 2014 and \$68.6M in 2015), and
12 for the newly regulated facilities \$227.1M (\$113.4M in 2014 and \$113.7M in 2015).

13
14 Base OM&A funds routine, day-to-day operations and maintenance-related activities in
15 support of the production of electricity from OPG's regulated hydroelectric generating
16 stations, along with associated administration and Hydro Thermal Operations Central
17 Support Group costs. As shown in Ex. F1-2-1 Table 4, the staff complement (FTEs)
18 associated with the regulated hydroelectric facilities has remained relatively stable over the
19 2010 - 2015 period. Therefore, the year-over-year changes in base OM&A costs are mostly
20 related to: labour rate changes, extraordinary items described in Section 3.0 below, the
21 Business Transformation reorganization described in Ex. A4-1-1 and A1-4-2 section 4.1, and
22 some additional maintenance planned in certain plant groups. Details of the year-over-year
23 variances in base OM&A expenditures for the historical, bridge and test years are discussed
24 in Exhibit F1-2-2.

25
26 Detailed descriptions of the activities included in base OM&A costs are provided below in
27 sections 3.0 and 3.1. Section 3.2 describes the Ottawa - St. Lawrence Plant Group common
28 support costs and the methodology for allocating these between R.H. Saunders GS and the
29 newly regulated stations. This level of allocation exists only within the Ottawa - St. Lawrence
30 Plant Group since the headquarters departments provide support for both R.H. Saunders
31 and the balance of stations that are part of the newly regulated segment. Section 3.3

1 describes the methodology for allocating base OM&A costs between OPA contracted
2 stations and the newly regulated stations. This level of allocation exists only within the
3 Central Hydro, Northeast, and Northwest Plant Groups that manage OPA contracted
4 stations. Sections 3.4 and 3.5 describe the Hydro Thermal Central Support Groups and the
5 methodology for allocating costs to the regulated hydroelectric stations.

6 7 **3.0 REGULATED HYDROELECTRIC BASE OM&A**

8 3.1.1 Base OM&A

9 Base OM&A expenditures for OPG's regulated hydroelectric facilities are attributed on a work
10 program basis, consistent with how costs are incurred. The OM&A budgets are established
11 through the annual business planning process (see Ex. A2-2-1 and Ex. F1-1-1). Base OM&A
12 budgets in each of the plant groups are categorized in the following general work programs:
13 operations, maintenance, and administration support.

14
15 Operations costs include all direct costs to operate the generating facilities for the purpose of
16 generating electricity or producing other related products (e.g., ancillary services required by
17 the electricity system). These costs include costs for control room operators, water
18 management activities including dam operations, dam safety surveillance inspections,
19 waterway patrol, water flow monitoring/snow surveys, ice breaking, and log operations.
20 These costs also include OPG's portion of all joint works operations costs, for example with
21 the New York Power Authority ("NYPA") pursuant to Joint Works Agreements.

22
23 Maintenance includes all costs associated with the direct maintenance of the facilities to
24 ensure their normal, safe, and environmentally sound operation. Maintenance plans are
25 established in a maintenance management system. The plans are used to prioritize work
26 execution and used to support budget requirements. As indicated in Ex. F1-1-1 Appendix A,
27 investment in hydroelectric facilities (including base OM&A funding) is determined using a
28 structured portfolio approach, and streamlined reliability centered maintenance principles.
29 The maintenance work program also includes OPG's portion of the maintenance costs for
30 joint works (e.g. NYPA).

1 Administration costs within the plant groups include all common support and other costs
2 incurred for the production facilities that are not directly related to the production of electricity.
3 In addition to the costs incurred within the plant groups, certain other costs incurred to
4 support the regulated hydroelectric facilities are provided on a centralized basis. The Hydro
5 Thermal Operations (HTO) Central Support Groups' costs include functions and activities not
6 provided within the plant groups such as specialized Engineering, Strategy and Business
7 Support, Dam Safety and Emergency Preparedness, and Hydro Thermal Project Execution.

8 9 3.1.2 Plant Group Staffing and Overtime

10 Plant Group staffing levels related to the regulated facilities are shown in F1-2-1 Table 4 and
11 include the total of regular and non-regular staff deployed for base OM&A, project OM&A,
12 and capital projects. Plant Group staffing levels also include an allocation of staff (FTEs)
13 between unregulated and regulated stations, and an allocation of HTO Central Support and
14 Ottawa – St. Lawrence Plant headquarters groups to the regulated stations. Staff (FTEs)
15 were allocated based on the percentage of total base OM&A costs allocated to the regulated
16 hydroelectric stations.

17
18 Incremental short-term labour resources utilized by hydroelectric plant groups include
19 overtime and temporary staff (i.e. non-regular staff). These resources are used for peak
20 work requirements (e.g. outages, responding to weather events, etc.), seasonal work, or to
21 complete necessary work impacted by short-term staff absences or vacancies.

22
23 Plant groups have been directed to reduce overtime wherever possible. As a result,
24 hydroelectric overtime usage has been reduced from 11 per cent of labour cost in 2001 to
25 under 6 per cent –for the test period. Hydroelectric plant groups also track overtime usage
26 against approved budgets throughout the year. Almost half of the overtime is used for
27 maintenance activities, approximately a third is used for project work (capital and OM&A),
28 about 15 per cent is used for operating activities, and only about 5 per cent is used in
29 administration. Budgets for temporary employees are mainly for seasonal workers (e.g.
30 summer students) and other forecast requirements. However, the actual utilization of
31 temporary staff is usually higher than budget since temporary staff are often hired for

1 unforeseen work or to backfill for vacant regular staff positions until they are filled (See
2 Appendix 2K, Ex. F4-3-1).

3 4 3.1.3 OM&A Costs by Resource

5 In Ex. F1-2-1 Tables 2 and 3, OM&A costs are presented by resource type. Direct plant
6 group labour accounts for approximately 66% of total base OM&A costs in the test period.
7 Labour costs include both regular and non-regular OPG employees, and their related
8 overtime. The remainder of total base OM&A is composed of allocated HTO support group
9 costs (13%), purchased services (10%), materials (6%), and other costs (5%).

10 11 3.1.4 Extraordinary Items

12 Niagara Bridge Divestitures

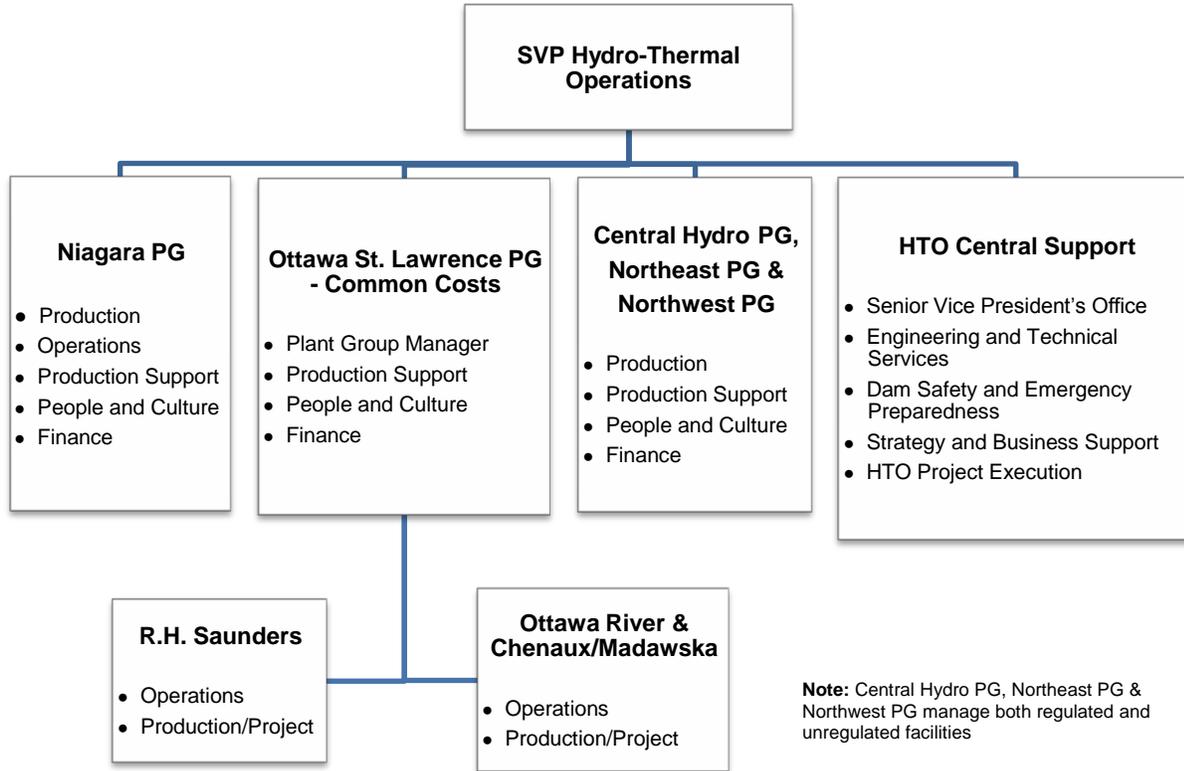
13 Included with the Niagara Plant Group's administrative costs is a program to divest certain
14 bridges in the Niagara Region owned by OPG. In 2009, OPG reached an agreement with
15 the City of Thorold to transfer to the city the Laura Secord Bridge, and reached a similar
16 agreement in 2011 for the Niagara Falls Road Bridge. These agreements successfully
17 relieved OPG of all future liabilities associated with these bridges. Negotiations are ongoing
18 with the Niagara Region to divest two more bridges, planned for 2013 - 2014.

19 20 Lake Gibson Provision

21 In addition to bridge divestitures, the Niagara Plant Group's actual administrative costs in
22 2011 include an extraordinary credit of \$19M related to the reversal of a provision for the
23 environmental cleanup of Lake Gibson (DeCew Falls GS). A long-term liability provision was
24 established by OPG, prior to April, 2005, for the clean-up of contaminated sediments in Lake
25 Gibson. Since that time work has been done by OPG in consultation with the Ministry of
26 Environment (MOE) to assess the risk associated with the contamination and related
27 cleanup. This work culminated in two assessment reports completed and approved by the
28 MOE in December 2009 and February 2012. The reports explain that the contaminated
29 sediments are not considered threats to drinking water drawn from Lake Gibson. Therefore,
30 no remediation of the Lake Gibson sediment contamination is anticipated. Correspondingly,
31 the liability provision was reversed resulting in an extraordinary credit of \$19M in 2011.

1

Hydroelectric Organization



2 3.2 Plant Group Organization Description

3 OPG's five hydroelectric plant groups have similar organizational structures. Described
4 below, along with the minor differences between plant groups, are the departments that
5 typically support the Plant Group Manager. These departments include:

- 6 • Production Department
- 7 • Production Support Department
- 8 • People and Culture Department (Human Resources/ Public Affairs/ Health & Safety)
- 9 • Finance Department

10

11 The methodology for allocating plant group costs are described in Sections 3.3 and 3.4.

12

13

14

1 3.2.1 Production Department

2 The Production Department's function in each of the plant groups is to control and maintain
3 the generation assets to produce electrical capacity, energy, and energy-related products
4 and services at targeted performance levels. This includes plant maintenance, shop services,
5 and materials stores. The Production Department is also accountable for the operation of
6 the generating stations and all associated water conveyance structures in accordance with
7 approved plans and applicable policies, contracts (e.g. NYPA Joint Works), and legal
8 requirements.

9

10 In the Niagara Plant Group, there are separate Production and Operations departments
11 reporting to the Plant Group Manager. Further, the Ottawa – St. Lawrence Plant Group, due
12 to its size, operates with three Production departments, one each for: R.H. Saunders GS,
13 the Ottawa River, and Chenaux GS / Madawaska River, including the operation of control
14 rooms at R.H. Saunders GS and Chenaux GS. Finally, as previously described in EB-2010-
15 0008, the Ottawa – St. Lawrence production departments are also responsible for the
16 management of projects.

17

18 The staff associated with Production functions are funded mostly through plant group base
19 OM&A budgets. There are 106 staff (2013 year-end value) associated with the Production
20 Department and 44 with the Operations Department in the Niagara Plant Group. In the
21 Ottawa-St. Lawrence Plant Group, 68 Production staff are associated with R.H. Saunders
22 GS, 78 staff with the Ottawa River stations, and 109 with Chenaux GS and the Madawaska
23 River stations. In the other plant groups, there are 79 staff associated with the Production
24 Department in the Central Hydro Plant Group, 84 in the Northeast Plant Group, and 109 in
25 the Northwest Plant Group.

26

27 3.2.2 Production Support Department

28 As part of the 2012 Business Transformation reorganization, the Production Support
29 Departments were created mainly from the former Asset and Technical Services
30 Departments and Project Departments in each plant group. The Production Support
31 Department provides specialist expertise in the area of business strategy, planning,

1 programming, asset portfolio management, decision support, business effectiveness, due
2 diligence in environment and managed systems, engineering support, execution of projects,
3 and consolidated site support services. However, the Niagara Plant Group's Production
4 Support Department also includes the site services function of the former Services
5 Department. Further, as described above, the Ottawa – St. Lawrence Plant Group includes
6 project management function within their Production Departments.

7
8 The staff associated with these functions are mostly funded through plant group base OM&A
9 budgets. There are 75 staff (2013 year-end value) associated with these functions in the
10 Niagara Plant Group, 28 staff in the Ottawa-St. Lawrence Plant Group, 20 in the Central
11 Hydro Plant Group, 22 in the Northeast Plant Group, and 21 in the Northwest Plant Group.

12 13 3.2.3 People and Culture Department

14 The People and Culture Department within each plant group provides support in the areas of
15 labour relations, vacancy management, health and safety, disability management,
16 compensation and benefits. The staff associated with these functions are part of OPG's
17 People and Culture corporate function and allocated through the cost allocation process
18 described in Ex. F3-1-1. There are six staff (2013 year-end value) associated with these
19 functions in the Niagara Plant Group, five staff in the Ottawa-St. Lawrence Plant Group, four
20 in the Central Hydro Plant Group, four in the Northeast Plant Group, and four in the
21 Northwest Plant Group.

22
23 Also reporting to the People and Culture Department Manager are plant group staff that
24 provide support for public affairs, stakeholder relations, community relations services, and
25 other support for the plant group. There are four staff (2013 year-end value) associated with
26 these functions in the Niagara Plant Group, one in the Central Hydro Plant Group, two in the
27 Northeast Plant Group, and three in the Northwest Plant Group. In the Ottawa – St.
28 Lawrence Plant Group starting in 2013, there are 6 staff (2013 year end value) reporting to
29 the Plant Group Manager providing the site business and public relations support.

30
31

1 3.2.4 Finance Department

2 The Finance Department, is managed by a Site Controller and provides financial
3 management support within each plant group. The department supports business planning,
4 budgeting, financial forecasting, management cost reporting and analysis, review of all
5 business cases, and monitoring adherence to corporate policies with respect to business
6 expenses, project classification, procurement, and internal control. In general, the staff
7 associated with these functions are part of OPG's corporate Finance Group and their costs
8 are allocated through the corporate cost allocation process described in Ex. F3-1-1.
9 However, some plant group funded staff also support these functions in the Central Hydro
10 and Northeast Plant Groups. For the Ottawa-St. Lawrence Plant Group, as described in
11 section 3.1.3 above, the plant group funded business support staff will be reporting to the
12 Plant Group Manager as of 2013.

13
14 There are four staff (2013 year-end value) associated with these functions in the Niagara
15 Plant Group, four staff in the Ottawa-St. Lawrence Plant Group, three in the Central Hydro
16 Plant Group, four in the Northeast Plant Group, and two in the Northwest Plant Group.

17
18 **3.3 Ottawa - St. Lawrence Plant Group Common Costs**

19 This section describes the Ottawa - St. Lawrence Plant Group common headquarters
20 departments and explains the methodology for allocating their costs to R.H. Saunders GS
21 and balance of the plant group stations that are in the newly regulated segment. The
22 allocation methodology follows the recommendations of R.J. Rudden Associates, Black &
23 Veatch Corporation, and HSG Group Inc as described below in section 3.5.

24
25 The Plant Group Manager leads, manages, and supports the provision of common services.
26 Starting in 2013, some staff previously with the People and Culture Department and the
27 Finance Department were included under the Plant Group Manager in a minor
28 reorganization. The services provided by the People and Culture Department and the
29 Finance Department are described above. The total cost of these three groups is allocated
30 to R.H. Saunders based on its proportion of the total budgeted base OM&A within the Ottawa
31 - St. Lawrence Plant Group. Base OM&A is generally linked to the size of the station and its

1 generation and therefore provides a reasonable basis for allocating common services costs
2 as discussed below in section 3.5.

3
4 As described above, the Production Support Department provides specialist services (e.g.
5 engineering) within the Ottawa - St. Lawrence Plant Group. R.H. Saunders is resourced to
6 provide some level of asset management and engineering support. As a result support
7 provided from the Production Support Department is modest and estimated at 15 per cent of
8 the total department costs based on management's estimates. Further, up until the end of
9 2012, R.H. Saunders was resourced to provide its own compliance management (information
10 and records management functions) and, based on management's estimates, none of the
11 compliance management function costs from this department were allocated to R.H.
12 Saunders. During the minor reorganization of headquarters support costs for 2013, it was
13 determined that Production Support would be providing compliance management services to
14 R.H. Saunders GS. Therefore, starting in 2013, compliance management costs are being
15 allocated to R.H. Saunders based on its proportion of the total budgeted base production
16 OM&A within the Ottawa/St.Lawrence Plant Group.

17
18 The balance of the headquarters support costs not allocated to R.H. Saunders GS are fully
19 attributable to the newly regulated Ottawa and Madawaska River stations. Approximately
20 20% of the costs for the common headquarters departments are allocated to R.H. Saunders,
21 and 80% to the newly regulated hydroelectric stations.

22 23 **3.4 Allocation Methodology for Plant Groups with Newly Regulated and** 24 **Unregulated Facilities**

25 OPG uses a standardized allocation methodology for plant groups that include newly
26 regulated and unregulated hydroelectric stations. The methodology used to allocate OM&A
27 costs varies depending on the nature of the cost at each specific organizational level. Base
28 maintenance costs are charged directly to the stations. Indirect plant group costs are
29 allocated using the station capacities (i.e., megawatts). HTO Central Support and Corporate
30 costs allocated to the plant groups are further allocated to the station level based on the
31 percentage of the station's contribution to the total OM&A costs (direct and indirect) within

1 the plant group. As required by the corporate allocation methodologies, pension and OPEB
2 costs are allocated using a labour allocator (headcount, FTE). The allocation of costs to the
3 newly regulated hydroelectric stations is consistent with the principles established for other
4 OPG cost allocations.

5
6 For 2014 – 2015, using the allocation method described above, approximately 89 per cent of
7 the total Central Hydro Plant Group costs, 50 per cent of the total Northeast Plant Group
8 costs, and 92 per cent of the total Northwest Plant Group costs, have been allocated to the
9 newly regulated stations.

11 **3.5 HTO Central Support Groups Description**

12 Prior to 2012, the Hydroelectric Central Support Groups, providing common or specialized
13 services to all of the hydroelectric plant groups, consisted of the following groups:
14 Engineering, Dam Safety and Emergency Preparedness, First Nations and Metis Relations
15 (formerly Aboriginal Relations), Business Support, Water Resources, Environment,
16 Hydroelectric Development, Hydroelectric Supply Chain, and the Executive Vice President's
17 office.

18
19 At the beginning of 2012, as a result of the Business Transformation reorganization, the
20 Hydro and Thermal Business Units were combined into one Hydro Thermal Operations
21 Business Unit (HTO). In addition, to align with the centre-led model as set out in Ex. A4-1-1,
22 the First Nations and Metis Relations (formerly Aboriginal Relations), Water Resources,
23 Environment, Supply Chain and the Business Development section of Hydroelectric
24 Development, were transferred to various corporate groups. The impacts on the OEB
25 approved central support allocations for 2012 are shown in Table 1. In the new Hydro
26 Thermal Operations Business Unit, the Central Support Groups, providing common or
27 specialized services to the Hydro Plant Groups and Thermal stations, consist of :

- 28 • Senior Vice President's Office
- 29 • Engineering and Technical Services
- 30 • Dam Safety and Emergency Preparedness
- 31 • Strategy and Business Support

- HTO Project Execution.

Table 1
2012 OEB Approved Central Support Allocations
Restated for the Impact of Business Transformation

Line No.	Hydroelectric Central Support Groups as per EB-2010-0008 F1-2-2 Table 1	2012 OEB Board Approved	Business Transformation Transfers Out of Hydro	HTO Central Support Groups as per EB-2013-XXXX F1-2-2 Table 1	2012 Restated Allocation (a)+(b)
		(a)	(b)		(c)
1	Business Support & Reg'ty Affairs	0.7		Strategy & Business Support	0.7
2	Water Resources & Aboriginal Affairs	1.2	(1.2)		0.0
3	Dam Safety & Emergency Prep	0.5		Dam Safety & Emergency Prep	0.5
4	Environment	0.6	(0.6)		0.0
5	Supply Chain	0.6	(0.6)		0.0
6	Hydroelectric Development	0.6	(0.3)	Hydro-Thermal Project Execution	0.2
7	Engineering Services	3.3		Engineering & Technical Services	3.3
8	EVP Office	0.6		SVP Office	0.6
9	Total	8.0	(2.7)		5.3

Note: The table does not include the impacts of the merger of Hydro Thermal business units

The following sections provide a brief description of each central support group. Section 3.6 describes the methodology used to allocate costs to the regulated and non-regulated facilities.

3.5.1 Senior Vice President - HTO's Office

Prior to 2012, budgeted Senior Vice President - HTO's Office costs included various expenses incurred by the EVP - Hydroelectric, including travel, administrative support and membership costs in various hydroelectric associations, such as the International Hydropower Association and Canadian Hydropower Association. In 2012, as part of the amalgamation of the Hydro and Thermal Business Units, the Executive Vice President – Hydro and Senior Vice President – Thermal offices were combined into one Senior Vice President- HTO office. Costs budgeted in this category are similar to those above. In 2013, there are expected to be two staff (year-end value).

1 3.5.2 HTO Engineering and Technical Services

2 Prior to 2012, the Hydroelectric Engineering Division provided specialized civil, mechanical,
3 and electrical engineering support to the hydroelectric plant groups. As part of the 2012
4 Business Transformation and the amalgamation of the Hydroelectric and Thermal Business
5 Units, a new Engineering and Technical Services Division was formed by combining
6 Engineering from the Hydroelectric Business Unit, Technical Services from the Thermal
7 Business Unit, and the Project Management Office from the Hydroelectric Business Services
8 and Water Resources Divisions. This new Division includes seven main departments:

- 9 • The Dams and Structures Department
10 • Power Equipment Department
11 • Balance of Plant Equipment Department
12 • Electrical, Protection and Controls Department
13 • Machine Dynamics and Component Integrity Department
14 • Performance & Testing Department
15 • Project Management Office

16 The Engineering and Technical Services Division has 125 staff (2013 year-end value),
17 consisting of engineers, technicians, and clerks.

18
19 3.5.3 Dam Safety and Emergency Preparedness

20 The Dam Safety and Emergency Preparedness group, which has six staff (2013 year-end
21 value), provides program oversight and guidance on dam safety and emergency
22 preparedness at all of OPG's dams. The plant groups are responsible for the operation and
23 maintenance of dams, and technical support is provided by the HTO Engineering and
24 Technical Services Division.

25
26 3.5.4 Strategy and Business Support

27 Prior to the 2012 Business Transformation, the Business Support Division, provided
28 business-level oversight, planning and reporting support for the EVP - Hydroelectric and the
29 hydroelectric plant groups, including regulatory support for OPG's rate application. As part of
30 the 2012 Business Transformation and the amalgamation of the Hydro and Thermal
31 Business Units, the Thermal and Hydro Business Support groups were merged and re-

1 named Strategy and Business Support. This Division continues to provide similar support
2 services for HTO. This division is expected to have 19 staff (2013 year end value).

3
4 3.5.5 Hydro Thermal Project Execution

5 Prior to 2012, the Hydroelectric Development division identified, studied, planned, and
6 oversaw the conceptual work, design and execution of hydroelectric re-development and
7 new development projects (e.g. Niagara Tunnel project, PGS Rehabilitation, and Ranney
8 Falls GS Expansion).

9
10 In 2012, as part of OPG's Business Transformation re-organization, Hydroelectric
11 Development was divided into two parts - Hydro Thermal Project Execution Division and
12 Business Development. OPG's Hydro Thermal Project Execution Division resulted from the
13 amalgamation of Hydro project offices (i.e. accountable for project execution) with the
14 Thermal Business Development Division. The Hydro Thermal Project Execution Division
15 remains part of OPG's Hydro Thermal business unit. The Business Development department
16 was rolled into Corporate Business Development.

17
18 Reporting to the Vice President of Hydro Thermal Project Execution, the group includes 22
19 staff (2013 year-end value) consisting of project managers, project engineers, and project
20 specialists.

21
22 3.5.6 First Nations and Métis Relations / Water Resources

23 The First Nations and Métis Relations Group, which had seven staff, provided business level
24 expertise and services for leading past grievance negotiations with First Nations, and
25 administering payments associated with settled past grievances. This Division was moved to
26 Corporate Relations and Communications as part of Business Transformation in 2012.

27
28 The Water Resources Department, which had nine staff, was previously part of Water
29 Resources and Aboriginal Affairs in EB-2010-0008. The department provides support for:
30 water management policy and planning, energy forecasting, and day-ahead coordination of

1 hydroelectric resources. As part of the 2012 Business Transformation re-organization, the
2 Water Resources department was transferred to Commercial Operations Business Unit.

3
4 **3.5.7 Environment**

5 Prior to 2012, the Environment Division, which had eight staff, provided environmental
6 oversight and support for the EVP-Hydroelectric and the plant groups. This division was
7 moved to the Commercial Operations and Environment Business Unit as part of the 2012
8 Business Transformation reorganization.

9
10 **3.5.8 Hydroelectric Supply Chain**

11 Prior to 2012, the Supply Chain Division was part of the Hydroelectric Business Unit and had
12 12 staff who provided procurement support activities and materials management activities for
13 all the hydroelectric plant groups and Hydroelectric Development. This Division was moved
14 to Business and Administrative Services in 2012 as part of the Business Transformation
15 reorganization.

16
17 **3.6 Allocation Methodology for HTO Central Support Costs**

18 The method for allocating Hydroelectric Central Support Group Costs was reviewed by R.J.
19 Rudden Associates in 2006 and Black & Veatch Corporation in 2009. In 2013, OPG's
20 allocation methodology was again independently evaluated by HSG Group Inc. R.J. Rudden
21 Associates recommended that as a general principle, direct assignment (i.e. time estimates
22 or management estimates of full time equivalents dedicated to a particular group) should be
23 used where practical and efficient, and base OM&A costs should be used to allocate all other
24 central support group costs that cannot be directly assigned. The recommendations were
25 implemented by OPG starting in 2006. R.J. Rudden also reviewed the allocation of Ottawa -
26 St. Lawrence common costs to R.H. Saunders and the balance of the plant group, and its
27 recommendations were adopted (see allocation methodology in section 3.4 above).

28
29 With respect to Hydroelectric central support costs, R.J. Rudden Associates, Black & Veatch,
30 and HSG Group Inc. recommended the use of plant group base OM&A costs to allocate
31 central costs that cannot be directly assigned or where it is inefficient to perform direct

1 assignment. Prior to 2012, this methodology was used to allocate the costs for the office of
2 the EVP - Hydroelectric, Dam Safety and Emergency Preparedness, First Nations and Metis
3 Relations (formerly Aboriginal Relations), Business Support, Water Resources, and
4 Environment. In the new HTO organization, this approved methodology continues to be
5 used for the SVP- HTO office, Strategy and Business Support, and Dam Safety and
6 Emergency Preparedness Divisions, except that Dam Safety costs are only allocated to
7 facilities that have dams. Prior to 2012, a direct assignment approach was generally used for
8 Engineering, Supply Chain, and Hydroelectric Development (except for Hydroelectric
9 Development overhead costs). This approach continues to be used in the new HTO
10 Engineering and Technical Services, and Hydro Thermal Project Execution Divisions.

11 12 3.6.1 Allocation of Engineering and Technical Services

13 The costs for Engineering services are allocated as follows:

- 14 • Estimates of engineering cost allocations for each year in the planning cycle are
15 developed during the business planning/budgeting process. Each department in the
16 Engineering Division develops time estimates for each of the plant groups (or plants
17 in the case of R.H. Saunders) based on a high level review of each plant group's
18 future work plans/projects and anticipated support requirements, as well as a review
19 of previous year's historical engineering support costs for each plant group.
- 20 • Total engineering hours are then allocated to each plant group based on these
21 reviews.
- 22 • The total engineering budget for the year is allocated using the ratio of estimated
23 hours for each plant group divided by the total engineering hours. The 2014 and 2015
24 planned engineering allocations to each plant group are calculated by applying the
25 2013 ratios (i.e. the ratios developed as part of the 2013 - 2015 business planning
26 process) to the forecast costs in 2014 and 2015, respectively.

27 28 3.6.2 Allocation of Hydro Thermal Project Execution

29 Prior to the 2012 Business Transformation reorganization, Hydroelectric Development OM&A
30 costs were either directly attributed to the regulated stations where applicable, or allocated
31 based on the total cost estimates for development projects. If a project was in the pre-

1 concept or concept phase, and was related to a regulated facility or site, then its costs were
2 directly attributed to that site (e.g. the PGS Reservoir Refurbishment and Expansion Study).
3 The costs associated with the office of the Vice President - Hydroelectric Development and
4 the general OM&A expenses were allocated based on estimated capital and OM&A project
5 expenditures.

6
7 As a result of the 2012 reorganization, and the amalgamation of Hydro and Thermal, this
8 group was divided into 2 separate groups, with the Niagara Tunnel and Lower Mattagami
9 project departments merging with Thermal Project Development to form the Hydro Thermal
10 Project Execution Division, which is part of the HTO Central Office. The Business
11 Development group (responsible for projects in the pre-concept, concept and definition
12 phase) moved to Corporate Business Development. The costs associated with the Hydro
13 Thermal Project Execution Division continue to be allocated based on direct assignment of
14 project costs, and for the office of the Vice President – Hydro Thermal Project Execution and
15 other OM&A expenses based on estimated capital and OM&A project expenditures. Since
16 the project portfolio varies year by year, the portion of general OM&A costs allocated to the
17 regulated plants can also vary.

18
19 3.6.3 Allocation of Hydroelectric Supply Chain

20 The allocation of Supply Chain costs, prior to 2012, in Hydroelectric were based on
21 management's time estimates. Approximately three staff were dedicated to procurement and
22 material management activities related to the regulated operations at R.H. Saunders GS and
23 the Niagara Plant Group. As a result of the 2012 Business Transformation, this division has
24 been moved to the Business and Administrative Services Business Unit.