

## **RATE BASE**

### **1.0 PURPOSE**

This evidence presents the rate base for the nuclear facilities, including drivers of period-over-period differences. In addition, it provides a description of each of the components of rate base and the methodology with which these components are determined.

### **2.0 OVERVIEW**

This evidence supports OPG's request for approval of a rate base for the nuclear facilities for the test period. The forecast of rate base for the nuclear facilities is \$4,119.8M in 2017, \$4,239.0M in 2018, \$4,124.7M in 2019, \$8,118.6M in 2020 and \$8,549.2M in 2021 (Ex. B1-1-1, Table 2). The evidence also presents the rate base for the nuclear facilities for 2013 to 2015 (actual) and 2016 (budget).

The components of rate base and the methodology used to calculate them are the same as those reflected in the rate base approved by the OEB in EB-2013-0321, EB-2010-0008 and EB-2007-0905.

OPG's forecast of rate base for the bridge and test periods is based on a forecast of net fixed/intangible in-service assets (including nuclear asset retirement costs or "ARC") and working capital associated with the nuclear facilities. The rate base amounts for the historical period are based on actual balances for those years. As in EB-2013-0321, EB-2010-0008 and EB-2007-0905, working capital consists of cash working capital, fuel inventory, and materials and supplies.

Nuclear rate base including ARC is forecast to increase significantly over the 2017 to 2021 period, primarily due to the in-service additions in respect of the Darlington Refurbishment Program ("DRP"). As shown in Ex. B3-1-1 Table 1, nuclear rate base reflects net plant of \$852.3M in 2017, \$955.2M in 2018, \$929.7M in 2019, \$5,031.4M in 2020 and \$5,476.2M in 2021 related to the DRP. The net plant rate base value for the Pickering station is close to fully depreciated by the end of the test period, in line with the current accounting end-of-life

1 (“EOL”) date of December 31, 2020. Nuclear rate base for the test period also includes a  
2 decrease in ARC of \$417.5M recorded at the end of 2015 related to the change in the  
3 nuclear asset retirement obligation (“ARO”) reflecting changes in the nuclear station EOL  
4 dates, for accounting purposes, effective December 31, 2015. The 2015 change in ARO and  
5 ARC is discussed in Ex. C2-1-1, and the nuclear station EOL dates in Ex. F4-1-1 section 3.2.

6  
7 The fixed/intangible asset component of rate base is discussed in section 3.1. Working  
8 capital is discussed in section 3.2. A more detailed comparison of rate base over the 2013 to  
9 2021 period is presented in section 4.0.

### 10 11 **3.0 COMPONENTS OF RATE BASE**

#### 12 **3.1 Fixed and Intangible Assets**

##### 13 **3.1.1 Overview**

14 The forecast net plant rate base values for the nuclear facilities, including ARC, are projected  
15 at \$3,408.3M in 2017, \$3,541.3M in 2018, \$3,453.2M in 2019, \$7,469.9M in 2020 and  
16 \$7,914.7M in 2021. The net plant for the nuclear facilities is presented separately for each of  
17 Darlington, DRP, Pickering, Nuclear Support Divisions, and ARC in Ex. B3-1-1 Table 1. All  
18 fixed assets under construction and intangible assets under development are excluded from  
19 the rate base for the period 2013 to 2021.

20  
21 As in EB-2013-0321, EB-2010-0008 and EB-2007-0905, fixed and intangible assets used by  
22 both the regulated and unregulated generating business units continue to be held centrally.  
23 These assets are not included in rate base. Instead, all generating business units are  
24 charged an asset service fee for the use of these assets, as discussed in Ex. F3-2-1.

##### 25 26 **3.1.2 Forecast Methodology and In-Service Additions**

27 OPG is using the same rate base forecast methodology used in EB-2013-0321, EB-2010-  
28 0008 and EB-2007-0905. The forecast of net fixed/intangible in-service asset values for 2016  
29 to 2021 is based on OPG’s property, plant, and equipment values (including intangible  
30 assets) as at December 31, 2015. In order to determine forecasts for 2016 to 2021, these

values are rolled forward based on a forecast of in-service additions (including adjustments to ARC, if any), retirements/transfers, and depreciation/amortization on these assets.

Exhibits D2-1-3 Table 4, Ex. D2-2-10 Table 5, and Ex. D3-1-2 Table 4 summarize the forecast in-service additions for all nuclear operations, DRP, and support services, respectively. Exhibit D3-1-2 Table 5 separately presents forecast support services in-service additions that are included in total regulated rate base, and those that impact the asset service fees and therefore are not included in rate base.

A summary of the forecast nuclear in-service additions for 2016 to 2021 is provided below in Chart 1.

**Chart 1**

**Forecast Nuclear In-service Capital Additions\* (\$M)**

\*Amounts may not add due to rounding.

	Reference	2016	2017	2018	2019	2020	2021
Nuclear operations capital projects	Ex. D2-1-3 Table 4, line 17 & 26	497.0	389.0	315.2	239.3	300.4	215.6
Darlington Refurbishment Program	Ex. D2-2-10 Table 5, line 12 & 17	350.4	374.4	8.9	0.0	4,809.2	0.4
Support services capital projects entering rate base	Nuclear Portion of Ex. D3-1-2 Table 5, lines 7,9,13 & 15	10.5	8.1	18.0	5.0	5.0	5.0
<b>Total nuclear in-service additions, excluding ARC</b>	Ex. B3-3-1 Table 1 & 2, col. (b)	<b>857.9</b>	<b>771.5</b>	<b>342.1</b>	<b>244.3</b>	<b>5,114.7</b>	<b>221.1</b>

The depreciation/amortization forecasts for 2016 to 2021 are determined by applying the estimated service lives and depreciation/amortization policy to the opening in-service fixed/intangible asset values and planned additions during the year. These depreciation/amortization forecasts are presented in Ex. F4-1-1 Table 2. The depreciation/amortization policy is described in Ex. F4-1-1.

1 The net fixed/intangible asset portion of rate base is determined using a mid-year average  
2 methodology. For large in-service additions or adjustments, where the in-service addition  
3 amount or the amount of an adjustment exceeds \$50M, the month in which the addition or  
4 adjustment is reflected is used, instead of a mid-year average, to improve accuracy. There  
5 are six nuclear in-service additions forecast during the bridge year and test period in the  
6 amount of greater than \$50M, the details of which are found in Notes 8 and 9 to Ex. B3-3-1  
7 Table 1 and Notes 1 and 3 to Ex. B3-3-1 Table 2.

8  
9 For example, the nuclear rate base reflects a forecast in-service amount of \$4,777.7M in  
10 February 2020 related to the return to service of Darlington Unit 2. Accordingly, the nuclear  
11 rate base forecast for 2020 reflects a weighting of 10.5/12 for this in-service amount.

12  
13 Supporting continuity schedules for the gross plant, gross in-service fixed/intangible assets  
14 and related accumulated depreciation/amortization for the nuclear facilities are provided in  
15 Ex. B3-3-1 Tables 1 and 2 and Ex. B3-4-1 Tables 1 and 2, respectively.

### 16 17 3.1.3 Asset Retirement Costs

18 Asset retirement costs for 2016 to 2021 are discussed in Ex. C2-1-1, with detailed continuity  
19 schedules of ARC and ARO for the prescribed facilities presented in Ex. C2-1-1 Table 2. This  
20 includes the decrease in ARC of \$417.5M recorded on December 31, 2015 for the prescribed  
21 facilities to reflect the changes in the nuclear station EOL dates. The December 31, 2015  
22 ARC adjustment is excluded from the 2015 rate base as it was recorded at the end of the  
23 year.

## 24 25 **3.2 Working Capital**

### 26 3.2.1 Overview

27 As in EB-2013-0321, EB-2010-0008 and EB-2007-0905, the working capital included in rate  
28 base consists of cash working capital, fuel inventory and materials and supplies. The fuel  
29 inventory and materials and supplies values for rate base continue to be determined using a  
30 mid-year average of opening and closing balances during the period. Cash working capital  
31 continues to be determined using a lead/lag analysis. Total working capital for the nuclear

1 facilities is forecast to be \$711.5M in 2017, \$697.7M in 2018, \$671.5M in 2019, \$648.7M in  
2 2020 and \$634.5M in 2021 (Ex. B3-5-1 Table 1).

### 3 4 3.2.2 Cash Working Capital

5 The methodology for calculating cash working capital is the same as that in EB-2013-0321,  
6 EB-2010-0008 and EB-2007-0905. Cash working capital is the average amount of capital  
7 needed to bridge the gap between the time expenditures are made to produce output and the  
8 time payment is received for that output. Cash working capital is calculated using net lag  
9 days, which is the difference between the time that revenue is received by OPG and the time  
10 that expenses are paid. The net lag is applied to each of OPG's expenses to determine the  
11 cash working capital amount.

12  
13 The net lag days used in the cash working capital calculation were determined by a lead/lag  
14 study conducted by OPG, the results of which were approved by the OEB in EB-2007-0905.  
15 As discussed and shown in Ex. B1-1-2, OPG has calculated cash working capital for the  
16 2013 to 2015 period by applying the net lag days from that study to the relevant expenses for  
17 those years.

18  
19 Given the modest size of cash working capital relative to the total rate base, OPG continues  
20 to use the cash working capital amount of the most recent historical year (i.e., 2015) as the  
21 amount for the bridge year and the test period.

### 22 23 3.2.3 Fuel Inventory

24 The nuclear generating stations maintain a nuclear fuel inventory as well as an inventory of  
25 fuel oil for standby generators. The cost of the inventory of fuel oil remains minimal  
26 compared to that of nuclear fuel.

27  
28  
29  
30  
31

1 Chart 2 provides details of the year-end nuclear fuel inventory for 2016 to 2021.

Chart 2											
Summary of Year-End Fuel Inventory - 2013 through 2021											
Line No.	Type	Units	2013 Actual	2014 Actual	2015 Actual	2016 Budget	2017 Planned	2018 Planned	2019 Planned	2020 Planned	2021 Planned
			(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
1	Uranium Concentrate	K\$	72,137	47,481	68,544	58,844	54,685	67,726	39,370	40,755	42,080
2		MgU	528	331	414	408	399	501	288	288	288
3		\$/KgU	136.62	143.50	165.76	143.93	136.95	135.08	136.48	141.28	145.88
4	Uranium Dioxide <sup>1</sup>	K\$	9,506	10,172	12,416	9,716	10,668	8,312	11,240	11,531	19,539
5		MgU	56	57	64	55	62	49	65	65	109
6		\$/KgU	171.04	177.85	195.33	176.75	171.93	168.80	172.05	176.59	180.03
7	Finished Bundles	K\$	247,161	236,060	218,909	183,266	177,671	156,495	156,357	153,200	141,105
8		MgU	951	924	844	733	695	624	629	600	545
9		\$/KgU	260	255	259	250	256	251	249	255	259
10	Fuel Oil	M\$	5.0	4.8	4.5	4.5	4.5	4.5	4.5	4.5	4.5
11	Total	M\$	333.8	298.5	304.3	256.3	247.5	237.0	211.4	209.9	207.2

<sup>1</sup> Includes reusable inventory resulting from the fuel bundle manufacturing process

As described in Ex. F2-5-1, the supply chain for nuclear fuel continues to consist of the purchase of uranium concentrate, the purchase of services to convert the uranium concentrate into uranium dioxide, and the purchase of services to manufacture fuel bundles that contain the uranium dioxide. OPG maintains inventories at each stage and maintains ownership of the work-in-process throughout this supply chain. The nuclear fuel inventory costs represent the accumulation of costs incurred by OPG during the supply chain process. Fuel inventory continues to be valued using the weighted average costing method.

The nuclear fuel inventory amounts for 2016 to 2021 are forecast based on the closing nuclear fuel inventory quantities and values as of December 31, 2015, and expected purchases and usage during the forecast period. The purchases reflect OPG's current target levels for the inventory, which are discussed in Ex. F2-5-1. This methodology is unchanged from EB-2013-0321.

### 3.2.4 Materials and Supplies

Materials and supplies consist of consumable supplies and spare parts. OPG's nuclear facilities are required to maintain substantial amounts of materials and supplies. The rate base materials and supplies value is net of a provision for accumulated obsolescence discussed below. OPG's inventory management system uses an average costing basis,

1 whereby the value of the materials and supplies inventory is based on the average unit price  
2 of each item times the quantity on hand.

3  
4 In accordance with US GAAP, materials and supplies continue to be valued at the lower of  
5 average cost and market value. The determination of the market value of materials and  
6 supplies takes into account various factors including technological obsolescence, the  
7 remaining life of the related facilities in which the materials and supplies are expected to be  
8 used, and adjustments required as a result of performing physical inventory counts. Charges  
9 incurred as a result of valuing nuclear materials and supplies at the lower of cost and market  
10 value are reflected in the inventory adjustments (charged to nuclear base OM&A) that reduce  
11 the nuclear materials and supplies rate base amount.

12  
13 The nuclear materials and supplies values for 2016 to 2021 are forecast based on the  
14 closing materials and supplies balance as of December 31, 2015 and expected consumption,  
15 purchases, and charges related to valuation at the lesser of cost and market value during the  
16 forecast period. This methodology is unchanged from EB-2013-0321.

17  
18 As described in Ex. F2-1-1, annual nuclear materials and supply inventory targets in 2017 to  
19 2021 have been established to optimize inventory and reduce costs.

#### 20 21 **4.0 COMPARISON OF RATE BASE**

22 A comparison of rate base amounts for the nuclear facilities for the 2013 to 2021 period is  
23 presented at Ex. B3-2-1 Table 1. Over the 2013 to 2015 period, total nuclear rate base  
24 declines gradually, primarily due to the effect of ARC depreciation. A further decrease in  
25 nuclear rate base forecast in 2016, compared to 2015, reflects the net effect of the decrease  
26 in ARC recorded at the end of 2015 and in-service additions for the DRP and other projects  
27 related to the Darlington station. Nuclear rate base increases significantly during the 2017 to  
28 2021 period due to the impact of DRP and other in-service additions related to the Darlington  
29 station, including a major increase in 2020 due to the planned return to service of the  
30 refurbished Darlington Unit 2. The increases in nuclear rate base over the test period are  
31 partly offset by the declining net plant value for the Pickering station, which reflects the

1 current station EOL date of December 31, 2020 and is therefore close to fully depreciated  
2 toward the end of the test period. The Pickering EOL date and the proposed treatment of  
3 future changes to that date are discussed in further detail in Ex. F4-1-1 section 3.2.

4  
5 The actual rate base for 2013, 2014 and 2015 was within approximately one percent of  
6 budgeted (2013) and OEB-approved amounts (2014 and 2015).

7  
8 Additional detail regarding in-service additions for the nuclear facilities including DRP and  
9 support services projects impacting the nuclear rate base amounts is provided in Exhibits D2  
10 and D3, respectively.



Numbers may not add due to rounding.

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Exhibit B1  
Tab 1  
Schedule 1  
Table 1

Table 1  
Prescribed Facility Rate Base - Regulated Hydroelectric (\$M)  
**Intentionally left blank (See Ex. A1-3-1)**

Numbers may not add due to rounding.

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EB-2016-0152

Exhibit B1

Tab 1

Schedule 1

Table 2

Table 2  
Prescribed Facility Rate Base - Nuclear (\$M)

Line No.	Rate Base Item	2013 Actual	2014 Actual	2015 Actual	2016 Budget	2017 Plan	2018 Plan	2019 Plan	2020 Plan	2021 Plan
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
1	<b>Gross Plant at Cost<sup>1</sup></b>	6,042.7	6,284.0	6,521.7	6,741.2	7,627.1	8,122.9	8,416.1	12,887.2	13,763.5
2	<b>Accumulated Depreciation and Amortization<sup>1</sup></b>	3,038.9	3,315.9	3,605.6	3,898.5	4,218.8	4,581.6	4,962.9	5,417.3	5,848.8
3	<b>Net Plant<sup>1</sup></b>	3,003.8	2,968.1	2,916.1	2,842.6	3,408.3	3,541.3	3,453.2	7,469.9	7,914.7
4	<b>Cash Working Capital<sup>2</sup></b>	32.0	9.3	11.0	11.0	11.0	11.0	11.0	11.0	11.0
5	<b>Fuel Inventory<sup>2</sup></b>	330.6	316.1	301.4	280.3	251.9	242.2	224.2	210.7	208.6
6	<b>Materials &amp; Supplies<sup>2</sup></b>	413.5	420.8	426.7	438.7	448.7	444.5	436.3	427.0	415.0
7	<b>Total</b>	3,779.8	3,714.4	3,655.2	3,572.6	4,119.8	4,239.0	4,124.7	8,118.6	8,549.2

Notes:

1 From Ex. B3-1-1, Table 1.

2 From Ex. B3-5-1, Table 1.

## CASH WORKING CAPITAL

### 1.0 PURPOSE AND OVERVIEW

This evidence presents OPG's methodology for calculating cash working capital. Application of this cash working capital methodology produces a forecast of annual cash working capital in the 2017 to 2021 period for the nuclear facilities of \$11.0M, as shown in Chart 1.

Chart 1 Summary of Results - Cash Working Capital (\$M) 2015 through 2021		
Line No.	Item	Nuclear
		(a)
1	Generation Revenue	37.7
2	Other Revenue	0.4
3	HST	(27.1)
4	<b>Total</b>	<b>11.0</b>

OPG continues to rely on its existing lead/lag methodology as the basis of the cash working capital calculation given that: 1) the OEB accepted OPG's cash working capital calculation in the previous three hearings; 2) the amount of cash working capital remains very small relative to the overall size of rate base; 3) OPG's two main lead/lag day drivers (revenue from electricity generation and labour costs) are relatively stable; and 4) the OEB's existing filing guidelines (EB-2011-0286) did not contemplate a new lead/lag study. OPG has adopted the approach used in EB-2013-0321 and EB-2010-0008 by applying the net lag days provided in its EB-2007-0905 evidence to 2015 actual revenues and expenses.

### 2.0 METHODOLOGY

OPG's prescribed nuclear assets earn revenues from generation sales and other revenues. OPG has applied the net lag days provided in EB-2007-0905 to revenue and expense

categories using financial results for OPG's prescribed nuclear assets.<sup>1</sup> For 2013 to 2015, actual financial results are used to determine the nuclear cash working capital for each of those years. The cash working capital amount determined for 2015 is included in rate base for the bridge and test years, as the 2015 calculation was the last assessment performed prior to the filing of evidence in this proceeding.

As in EB-2013-0321, EB-2010-0008 and EB-2007-0905, in addition to the working capital calculations for generation sales and other revenues, cash working capital requirements related to commodity taxes (i.e., HST) are calculated separately and are included as a component of cash working capital.

### **3.0 GENERATION SALES**

The largest component of revenue for the prescribed assets is generation sales, which consist of electricity sales and the provision of ancillary services to the IESO. The revenue lag associated with generation sales and the associated expense leads, as described in EB-2007-0905, and detailed cash working capital calculations for 2015 are provided in Chart 2 for nuclear generation.

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<sup>1</sup> As in previous proceedings, expense categories are listed separately in the calculations of total cash working capital if the expense amount is greater than \$2M. Categories below \$2M are aggregated in the "All other cash expenses" line in Charts 2 and 3. Therefore, the number of expense lead days presented for the "All other cash expenses" line may differ from those shown in EB-2013-0321, EB-2010-0008 and EB-2007-0905 to the extent categories below \$2M vary from prior years.

Chart 2 Cash Working Capital - Nuclear Generation 2015						
Line No.	Expense Category	Expense Amount (\$M)	Revenue Lag Days	Expense Lead Days	Net Lead/Lag Days	Cash Working Capital (\$M)
		(a)	(b)	(c)	(d) = (b) - (c)	(e) = (a) * (d)/365
	<u>OM&amp;A Expenses:</u>					
1	Labour (incl. Overtime)	1,256.0	35.7	20.9	14.8	50.9
2	EPSCA Labour (incl. Overtime)	10.7	35.7	12.0	23.7	0.7
3	Consultants - Nuclear (i.e. Managed Task Services)	283.6	35.7	71.3	(35.6)	(27.7)
4	Consultants - Corporate (i.e. Managed Task Services)	44.6	35.7	40.4	(4.7)	(0.6)
5	Computer Equipment	2.8	35.7	30.0	5.7	0.0
6	Computer Software and Licences	11.9	35.7	(23.1)	58.8	1.9
7	Augmented Staff - Nuclear	33.2	35.7	44.4	(8.7)	(0.8)
8	Augmented Staff - Corporate	5.0	35.7	61.4	(25.7)	(0.4)
9	Outside Services - Corporate	65.9	35.7	6.2	29.5	5.3
10	Telecommunications	7.7	35.7	54.5	(18.8)	(0.4)
11	Facilities	8.2	35.7	0.0	35.7	0.8
12	Operating Licences	35.6	35.7	2.8	32.9	3.2
13	Utilities - Corporate	13.1	35.7	61.3	(25.6)	(0.9)
13	Membership fees	4.6	35.7	(77.9)	113.6	1.4
14	Transport Work Equipment	4.1	35.7	56.0	(20.3)	(0.2)
15	Travel & Accommodation	4.3	35.7	46.0	(10.3)	(0.1)
16	All other cash expenses	18.9	35.7	33.7	2.0	0.1
	<u>Centrally-held OM&amp;A Expenses:</u>					
17	Pension and OPEB Costs	103.4	35.7	17.1	18.6	5.3
18	Performance Incentives	17.1	35.7	240.0	(204.3)	(9.6)
19	ONFA Guarantee Fee	7.8	35.7	(151.5)	187.2	4.0
20	Fiscal Calendar Adjustment	3.5	35.7	20.9	14.8	0.1
21	Insurance	12.7	35.7	(103.7)	139.4	4.9
22	Total OM&A Expenses					38.1
	<u>Other Costs:</u>					
23	Property Taxes	15.1	35.7	1.9	33.8	1.4
24	Income Taxes	(31.8)	35.7	15.1	20.6	(1.8)
25	Total Other Costs					(0.4)
26	<b>Cash Working Capital - Nuclear</b>					<b>37.7</b>

#### 4.0 OTHER REVENUE

Other nuclear revenue consists of isotope and heavy water sales described in Ex. G2-1-1.<sup>2</sup>

The lead/lag days used to derive the cash working capital in EB-2013-0321, EB-2010-0008 and EB-2007-0905 have been applied to the appropriate 2015 expenses. Chart 3 summarizes the results.

<sup>2</sup> Consistent with the OEB's Decision in EB-2010-0008 that 50% of heavy water sales and related direct costs is to be included as an offset to the nuclear revenue requirement, 50% of OPG's heavy water revenue and direct costs are included in the 2015 cash working capital calculations.

<b>Chart 3</b> <b>Cash Working Capital - Other Revenue</b> <b>2015</b>						
Line No.	Expense Category	Expense Amount (\$M)	Revenue Lag Days	Expense Lead Days	Net Lead/Lag Days	Cash Working Capital (\$M)
		(a)	(b)	(c)	(d) = (b) - (c)	(e) = (a) * (d)/365
1	Labour	3.2	58.1	20.9	37.2	0.3
2	All other cash expenses	2.8	58.1	49.1	9.0	0.1
3	<b>Total Cash Working Capital</b>					<b>0.4</b>

## 5.0 HARMONIZED SALES TAX

OPG pays HST to suppliers for the purchase of goods and services and remits HST that is collected on revenue to the government. The HST lag is the time between the HST payment date (to the supplier or to the government) and the date the government either refunds the HST to OPG or when OPG receives the input tax credit. OPG also collects HST from the IESO before making the remittance.

The 2015 HST cash working capital is calculated as shown in Chart 4 for the nuclear business:

<b>Chart 4</b> <b>Cash Working Capital - HST (\$M)</b> <b>2015</b>		
Line No.	Item	Nuclear
		(a)
1	Generation Revenue	(43.2)
2	Other Revenue	1.8
3	HST Payments - Regulated	14.3
4	<b>Total</b>	<b>(27.1)</b>

Further details on HST are provided in Ex. F4-2-1, section 5.0.

Numbers may not add due to rounding.

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Exhibit B3

Tab 1

Schedule 1

Table 1

Table 1  
Prescribed Facility Rate Base - Nuclear (\$M)  
Years Ending December 31, 2013 to 2021

Line No.	Prescribed Facility	2013 Actual			2014 Actual			2015 Actual		
		Gross Plant at Cost	Less: Accumulated Depreciation and Amortization	Net Plant	Gross Plant at Cost	Less: Accumulated Depreciation and Amortization	Net Plant	Gross Plant at Cost	Less: Accumulated Depreciation and Amortization	Net Plant
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
1	Darlington NGS	801.9	294.8	507.1	870.5	326.9	543.6	939.1	359.6	579.5
2	Darlington Refurbishment Program	61.3	1.1	60.2	125.9	4.7	121.2	203.1	10.5	192.6
3	Pickering NGS	2,008.1	1,145.8	862.3	2,094.3	1,279.0	815.3	2,170.9	1,422.5	748.4
4	Nuclear Support Divisions <sup>1</sup>	332.1	228.1	104.1	354.2	255.6	98.5	369.3	282.6	86.8
5	Nuclear - Excluding Asset Retirement Costs	3,203.5	1,669.9	1,533.6	3,444.8	1,866.2	1,578.7	3,682.5	2,075.1	1,607.4
6	Asset Retirement Costs	2,839.2	1,369.0	1,470.2	2,839.2	1,449.7	1,389.4	2,839.2	1,530.5	1,308.7
7	Total	6,042.7	3,038.9	3,003.8	6,284.0	3,315.9	2,968.1	6,521.7	3,605.6	2,916.1

Line No.	Prescribed Facility	2016 Budget			2017 Plan			2018 Plan		
		Gross Plant at Cost	Less: Accumulated Depreciation and Amortization	Net Plant	Gross Plant at Cost	Less: Accumulated Depreciation and Amortization	Net Plant	Gross Plant at Cost	Less: Accumulated Depreciation and Amortization	Net Plant
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
8	Darlington NGS	1,190.5	393.7	796.7	1,461.3	434.2	1,027.1	1,724.6	482.0	1,242.6
9	Darlington Refurbishment Program	440.1	21.0	419.1	893.3	41.0	852.3	1,024.0	68.8	955.2
10	Pickering NGS	2,299.1	1,578.6	720.5	2,439.5	1,761.4	678.1	2,525.6	1,972.9	552.7
11	Nuclear Support Divisions <sup>1</sup>	389.8	309.2	80.6	411.3	336.0	75.3	427.0	361.3	65.7
12	Nuclear - Excluding Asset Retirement Costs	4,319.5	2,302.6	2,016.9	5,205.4	2,572.5	2,632.9	5,701.2	2,885.0	2,816.2
13	Asset Retirement Costs	2,421.7	1,596.0	825.7	2,421.7	1,646.3	775.4	2,421.7	1,696.5	725.1
14	Total	6,741.2	3,898.5	2,842.6	7,627.1	4,218.8	3,408.3	8,122.9	4,581.6	3,541.3

Line No.	Prescribed Facility	2019 Plan			2020 Plan			2021 Plan		
		Gross Plant at Cost	Less: Accumulated Depreciation and Amortization	Net Plant	Gross Plant at Cost	Less: Accumulated Depreciation and Amortization	Net Plant	Gross Plant at Cost	Less: Accumulated Depreciation and Amortization	Net Plant
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
15	Darlington NGS	1,964.6	536.1	1,428.5	2,220.3	595.9	1,624.3	2,438.8	661.8	1,777.0
16	Darlington Refurbishment Program	1,028.4	98.7	929.7	5,224.7	193.3	5,031.4	5,837.9	361.7	5,476.2
17	Pickering NGS	2,562.3	2,197.8	364.4	2,569.8	2,427.8	142.0	2,602.3	2,571.0	31.4
18	Nuclear Support Divisions <sup>1</sup>	439.1	383.4	55.7	450.8	403.2	47.6	462.7	422.8	40.0
19	Nuclear - Excluding Asset Retirement Costs	5,994.4	3,216.1	2,778.3	10,465.6	3,620.2	6,845.3	11,341.8	4,017.2	7,324.6
20	Asset Retirement Costs	2,421.7	1,746.8	674.9	2,421.7	1,797.1	624.6	2,421.7	1,831.6	590.1
21	Total	8,416.1	4,962.9	3,453.2	12,887.2	5,417.3	7,469.9	13,763.5	5,848.8	7,914.7

Notes:

1 Includes support divisions within nuclear accountable for providing specialized services (e.g. Nuclear Engineering, Inspection and Maintenance Services).

Numbers may not add due to rounding.

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Table 1  
Comparison of Prescribed Facility Rate Base - Nuclear (\$M)

Line No.	Business Unit	2013 Budget	(c)-(a) Change	2013 Actual	(g)-(c) Change	2014 OEB Approved	(g)-(e) Change	2014 Actual	(k)-(g) Change	2015 OEB Approved	(k)-(i) Change	2015 Actual
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
1	<b>Nuclear - Excluding Asset Retirement Costs</b>	2,285.9	23.8	2,309.7	15.3	2,317.2	7.8	2,325.0	21.5	2,350.2	(3.7)	2,346.5
2	<b>Nuclear - Asset Retirement Costs</b>	1,470.2	(0.0)	1,470.2	(80.7)	1,389.5	(0.1)	1,389.4	(80.7)	1,308.8	(0.1)	1,308.7
3	<b>Nuclear - Total</b>	3,756.1	23.7	3,779.8	(65.4)	3,706.7	7.7	3,714.4	(59.2)	3,659.0	(3.8)	3,655.2

Line No.	Business Unit	2015 Actual	(c)-(a) Change	2016 Budget	(e)-(c) Change	2017 Plan	(g)-(e) Change	2018 Plan	(i)-(g) Change	2019 Plan	(k)-(i) Change	2020 Plan
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
4	<b>Nuclear - Excluding Asset Retirement Costs</b>	2,346.5	400.4	2,746.9	597.5	3,344.4	169.5	3,513.9	(64.1)	3,449.8	4,044.2	7,494.0
5	<b>Nuclear - Asset Retirement Costs</b>	1,308.7	(483.0)	825.7	(50.3)	775.4	(50.3)	725.1	(50.3)	674.9	(50.3)	624.6
6	<b>Nuclear - Total</b>	3,655.2	(82.6)	3,572.6	547.2	4,119.8	119.3	4,239.0	(114.4)	4,124.7	3,993.9	8,118.6

Line No.	Business Unit	2020 Plan	(c)-(a) Change	2021 Plan
		(a)	(b)	(c)
7	<b>Nuclear - Excluding Asset Retirement Costs</b>	7,494.0	465.0	7,959.1
8	<b>Nuclear - Asset Retirement Costs</b>	624.6	(34.5)	590.1
9	<b>Nuclear - Total</b>	8,118.6	430.6	8,549.2



Numbers may not add due to rounding.

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Table 1

Table 1  
Continuity of Gross Property, Plant and Equipment - Nuclear (\$M)  
Years Ending December 31, 2013 to 2016

Line No.	Prescribed Facility	Opening Balance	In-Service Additions	Retirements, Transfers & Adjustments	(b)+(c) Net Change	(a)+(d) Closing Balance	(a+e)/2 Gross Plant Rate Base Amount
		(a)	(b)	(c)	(d)	(e)	(f)
	<b>2013 Actual<sup>1</sup>:</b>						
1	Darlington NGS	759.6	83.4	1.2	84.6	844.2	801.9
2	Darlington Refurbishment Program <sup>2</sup>	5.0	99.2	0.0	99.2	104.2	61.3
3	Pickering NGS	1,959.6	99.7	(2.6)	97.1	2,056.7	2,008.1
4	Nuclear Support Divisions <sup>4</sup>	316.8	33.9	(3.2)	30.7	347.5	332.1
5	Nuclear - Excluding Asset Retirement Costs	3,041.0	316.1	(4.6)	311.5	3,352.5	3,203.5
6	Asset Retirement Costs	2,839.2	0.0	0.0	0.0	2,839.2	2,839.2
7	<b>Total</b>	5,880.2	316.1	(4.6)	311.5	6,191.7	6,042.7
	<b>2014 Actual:</b>						
8	Darlington NGS	844.2	52.6	(0.0)	52.5	896.7	870.5
9	Darlington Refurbishment Program <sup>3</sup>	104.2	43.5	0.0	43.5	147.6	125.9
10	Pickering NGS	2,056.7	75.7	(0.5)	75.2	2,131.9	2,094.3
11	Nuclear Support Divisions <sup>4</sup>	347.5	13.4	(0.0)	13.3	360.8	354.2
12	Nuclear - Excluding Asset Retirement Costs	3,352.5	185.1	(0.6)	184.6	3,537.1	3,444.8
13	Asset Retirement Costs	2,839.2	0.0	0.0	0.0	2,839.2	2,839.2
14	<b>Total</b>	6,191.7	185.1	(0.6)	184.6	6,376.3	6,284.0
	<b>2015 Actual:</b>						
15	Darlington NGS <sup>5</sup>	896.7	117.4	4.1	121.5	1,018.3	939.1
16	Darlington Refurbishment Program <sup>6</sup>	147.6	147.1	0.0	147.1	294.8	203.1
17	Pickering NGS	2,131.9	79.6	(1.6)	78.0	2,209.9	2,170.9
18	Nuclear Support Divisions <sup>4</sup>	360.8	17.1	(0.1)	17.0	377.9	369.3
19	Nuclear - Excluding Asset Retirement Costs	3,537.1	361.2	2.5	363.7	3,900.8	3,682.5
20	Asset Retirement Costs <sup>7</sup>	2,839.2	(417.5)	0.0	(417.5)	2,421.7	2,839.2
21	<b>Total</b>	6,376.3	(56.3)	2.5	(53.8)	6,322.4	6,521.7
	<b>2016 Budget:</b>						
22	Darlington NGS <sup>8</sup>	1,018.3	305.1	0.0	305.1	1,323.4	1,190.5
23	Darlington Refurbishment Program <sup>9</sup>	294.8	350.4	0.0	350.4	645.2	440.1
24	Pickering NGS	2,209.9	178.4	0.0	178.4	2,388.3	2,299.1
25	Nuclear Support Divisions <sup>4</sup>	377.9	24.0	0.0	24.0	401.8	389.8
26	Nuclear - Excluding Asset Retirement Costs	3,900.8	857.9	0.0	857.9	4,758.7	4,319.5
27	Asset Retirement Costs	2,421.7	0.0	0.0	0.0	2,421.7	2,421.7
28	<b>Total</b>	6,322.4	857.9	0.0	857.9	7,180.3	6,741.2

Notes:

- 1 2013 Actual from EB-2013-0321 Ex. L-1.0-1, Staff-002, Att. 1, Table 2 for the corresponding rows and columns.
- 2 As shown in EB-2013-0321 Ex. L-9.1-17, SEC-132, Att. 1, Table 12a, Table to Note 1, line 4a.
- 3 As shown in EB-2014-0370 Ex. H-1-1-2, Table 12a, Table to Note 6, line 1b.
- 4 Includes support divisions within nuclear accountable for providing specialized services (e.g. Nuclear Engineering, Inspection and Maintenance Services).
- 5 Reflects in-service addition of \$55.1M for the Operations Support Building Refurbishment at the end of October 2015. This amount is assigned a two-month weighting in calculating the 2015 Gross Plant Rate Base amount.
- 6 Reflects in-service addition of \$86.6M for the Darlington Refurbishment Program Office in mid September 2015. This amount is assigned a three and a half-month weighting in calculating the 2015 Gross Plant Rate Base amount.
- 7 The change in asset retirement costs was recorded on December 31, 2015 (from Ex. C2-1-1 Table 2, line 24, col. (c)), therefore the Gross Plant Rate Base amount excludes the impact of this change.
- 8 Reflects forecast in-service addition of \$94.2M for the Auxiliary Heating System in mid April 2016. (Ex. D2-1-3 Table 1, line 11, col. (k)). This amount is assigned an eight and a half-month weighting in calculating the 2016 Gross Plant Rate Base amount.
- 9 Reflects forecast in-service additions of \$87.0M for the R&FR - Tooling for Removal Activities in mid May 2016, \$80.1M for the Containment Filtered Venting System in mid August 2016, and \$105.3M for the Third Emergency Power Generator in mid October 2016, as shown in Ex. D2-2-10 Table 2, col. (k) at line 2, line 10, and line 9, respectively. These amounts are assigned a seven and a half-month, a four and half-month and a two and a half-month weighting, respectively, in calculating the 2016 Gross Plant Rate Base amount.

Numbers may not add due to rounding.

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Table 2  
Continuity of Property, Plant and Equipment - Nuclear (\$M)  
Years Ending December 31, 2017 to 2021

Line No.	Prescribed Facility	Gross Plant Opening Balance	In-Service Additions	Retirements, Transfers & Adjustments	(b)+(c) Net Change	(a)+(d) Closing Balance	(a+e)/2 Gross Plant Rate Base Amount
		(a)	(b)	(c)	(d)	(e)	(f)
	<b>2017 Plan:</b>						
1	Darlington NGS	1,323.4	275.8	0.0	275.8	1,599.2	1,461.3
2	Darlington Refurbishment Program <sup>1</sup>	645.2	374.4	0.0	374.4	1,019.5	893.3
3	Pickering NGS	2,388.3	102.4	0.0	102.4	2,490.7	2,439.5
4	Nuclear Support Divisions <sup>2</sup>	401.8	18.8	0.0	18.8	420.7	411.3
5	Nuclear - Excluding Asset Retirement Costs	4,758.7	771.5	0.0	771.5	5,530.2	5,205.4
6	Asset Retirement Costs	2,421.7	0.0	0.0	0.0	2,421.7	2,421.7
7	<b>Total</b>	<b>7,180.3</b>	<b>771.5</b>	<b>0.0</b>	<b>771.5</b>	<b>7,951.8</b>	<b>7,627.1</b>
	<b>2018 Plan:</b>						
8	Darlington NGS	1,599.2	250.8	0.0	250.8	1,850.0	1,724.6
9	Darlington Refurbishment Program	1,019.5	8.9	0.0	8.9	1,028.4	1,024.0
10	Pickering NGS	2,490.7	69.7	0.0	69.7	2,560.5	2,525.6
11	Nuclear Support Divisions <sup>2</sup>	420.7	12.6	0.0	12.6	433.3	427.0
12	Nuclear - Excluding Asset Retirement Costs	5,530.2	342.1	0.0	342.1	5,872.3	5,701.2
13	Asset Retirement Costs	2,421.7	0.0	0.0	0.0	2,421.7	2,421.7
14	<b>Total</b>	<b>7,951.8</b>	<b>342.1</b>	<b>0.0</b>	<b>342.1</b>	<b>8,293.9</b>	<b>8,122.9</b>
	<b>2019 Plan:</b>						
15	Darlington NGS	1,850.0	229.2	0.0	229.2	2,079.2	1,964.6
16	Darlington Refurbishment Program	1,028.4	0.0	0.0	0.0	1,028.4	1,028.4
17	Pickering NGS	2,560.5	3.6	0.0	3.6	2,564.0	2,562.3
18	Nuclear Support Divisions <sup>2</sup>	433.3	11.6	0.0	11.6	444.9	439.1
19	Nuclear - Excluding Asset Retirement Costs	5,872.3	244.3	0.0	244.3	6,116.6	5,994.4
20	Asset Retirement Costs	2,421.7	0.0	0.0	0.0	2,421.7	2,421.7
21	<b>Total</b>	<b>8,293.9</b>	<b>244.3</b>	<b>0.0</b>	<b>244.3</b>	<b>8,538.3</b>	<b>8,416.1</b>
	<b>2020 Plan:</b>						
22	Darlington NGS	2,079.2	282.0	0.0	282.0	2,361.3	2,220.3
23	Darlington Refurbishment Program <sup>3</sup>	1,028.4	4,809.2	0.0	4,809.2	5,837.7	5,224.7
24	Pickering NGS <sup>4</sup>	2,564.0	11.6	0.0	11.6	2,575.6	2,569.8
25	Nuclear Support Divisions <sup>2</sup>	444.9	11.8	0.0	11.8	456.7	450.8
26	Nuclear - Excluding Asset Retirement Costs	6,116.6	5,114.7	0.0	5,114.7	11,231.3	10,465.6
27	Asset Retirement Costs	2,421.7	0.0	0.0	0.0	2,421.7	2,421.7
28	<b>Total</b>	<b>8,538.3</b>	<b>5,114.7</b>	<b>0.0</b>	<b>5,114.7</b>	<b>13,652.9</b>	<b>12,887.2</b>
	<b>2021 Plan:</b>						
29	Darlington NGS	2,361.3	155.1	0.0	155.1	2,516.4	2,438.8
30	Darlington Refurbishment Program	5,837.7	0.4	0.0	0.4	5,838.1	5,837.9
31	Pickering NGS <sup>4</sup>	2,575.6	53.5	0.0	53.5	2,629.1	2,602.3
32	Nuclear Support Divisions <sup>2</sup>	456.7	12.0	0.0	12.0	468.7	462.7
33	Nuclear - Excluding Asset Retirement Costs	11,231.3	221.1	0.0	221.1	11,452.3	11,341.8
34	Asset Retirement Costs	2,421.7	0.0	0.0	0.0	2,421.7	2,421.7
35	<b>Total</b>	<b>13,652.9</b>	<b>221.1</b>	<b>0.0</b>	<b>221.1</b>	<b>13,874.0</b>	<b>13,763.5</b>

Notes:

- Reflects forecast in-service addition of \$365.9M for the Heavy Water Storage facility at the beginning of May 2017. (Ex. D2-2-10 Table 2, line 3, col. (l)). This amount is assigned an eight month weighting in calculating the 2017 Gross Plant Rate Base amount.
- Includes support divisions within nuclear accountable for providing specialized services (e.g. Nuclear Engineering, Inspection and Maintenance Services).
- Reflects forecast in-service addition of \$4,777.7M for the return to service of the refurbished Darlington Unit 2 in mid February 2020 (included in amount at Ex. D2-2-10 Table 2, line 1, col. (o)). This amount is assigned a ten and a half-month weighting in calculating the 2020 Gross Plant Rate Base amount.
- The closing net plant balance for Pickering NGS in 2020 and 2021 reflects minor fixed assets (e.g., portable equipment) assumed to be transferrable to support other parts of OPG's regulated operations.

Numbers may not add due to rounding.

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Tab 4  
Schedule 1  
Table 1

Table 1  
Continuity of Accumulated Depreciation and Amortization - Nuclear (\$M)  
Years Ending December 31, 2013 to 2016

Line No.	Prescribed Facility	Opening Balance	Depreciation and Amortization	Retirements, Transfers & Adjustments	(a)+(b)+(c) Closing Balance	(a+d)/2 Accumulated Depreciation and Amortization Rate Base Amount
		(a)	(b)	(c)	(d)	(e)
	<b>2013 Actual<sup>1</sup>:</b>					
1	Darlington NGS	279.8	32.3	(2.2)	309.9	294.8
2	Darlington Refurbishment Program <sup>2</sup>	0.0	2.3	0.0	2.3	1.1
3	Pickering NGS	1,082.9	127.5	(1.7)	1,208.7	1,145.8
4	Nuclear Support Divisions <sup>3</sup>	214.2	27.3	0.4	241.9	228.1
5	Nuclear - Excluding Asset Retirement Costs	1,576.9	189.4	(3.5)	1,762.8	1,669.9
6	Asset Retirement Costs	1,328.6	80.7	0.0	1,409.4	1,369.0
7	<b>Total</b>	<b>2,905.6</b>	<b>270.1</b>	<b>(3.5)</b>	<b>3,172.2</b>	<b>3,038.9</b>
	<b>2014 Actual:</b>					
8	Darlington NGS	309.9	34.0	(0.0)	343.8	326.9
9	Darlington Refurbishment Program <sup>4</sup>	2.3	4.7	0.0	7.0	4.7
10	Pickering NGS	1,208.7	140.9	(0.5)	1,349.2	1,279.0
11	Nuclear Support Divisions <sup>3</sup>	241.9	27.4	(0.0)	269.3	255.6
12	Nuclear - Excluding Asset Retirement Costs	1,762.8	207.0	(0.5)	1,969.3	1,866.2
13	Asset Retirement Costs	1,409.4	80.7	0.0	1,490.1	1,449.7
14	<b>Total</b>	<b>3,172.2</b>	<b>287.8</b>	<b>(0.5)</b>	<b>3,459.4</b>	<b>3,315.9</b>
	<b>2015 Actual:</b>					
15	Darlington NGS	343.8	31.5	(0.0)	375.4	359.6
16	Darlington Refurbishment Program	7.0	7.0	0.0	14.0	10.5
17	Pickering NGS	1,349.2	147.3	(0.8)	1,495.8	1,422.5
18	Nuclear Support Divisions <sup>3</sup>	269.3	26.6	(0.1)	295.8	282.6
19	Nuclear - Excluding Asset Retirement Costs	1,969.3	212.4	(0.9)	2,180.9	2,075.1
20	Asset Retirement Costs	1,490.1	80.7	0.0	1,570.8	1,530.5
21	<b>Total</b>	<b>3,459.4</b>	<b>293.2</b>	<b>(0.9)</b>	<b>3,751.7</b>	<b>3,605.6</b>

Notes:

- 1 2013 Actual from EB-2013-0321 Ex. L-1.0-1, Staff-002, Att. 1, Table 3.
- 2 As shown in EB-2013-0321 Ex. L-9.1-17, SEC-132, Att. 1, Table 12a, Table to Note 1, line 5a.
- 3 Includes support divisions within nuclear accountable for providing specialized services (e.g. Nuclear Engineering, Inspection and Maintenance Services).
- 4 As shown in EB-2014-0370 Ex. H1-1-2, Table 12a, Table to Note 6, line 2b.

Numbers may not add due to rounding.

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Tab 4  
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Table 2

Table 2  
Continuity of Accumulated Depreciation and Amortization - Nuclear (\$M)  
Years Ending December 31, 2017 to 2021

Line No.	Prescribed Facility	Opening Balance	Depreciation and Amortization on Opening Balance	Depreciation and Amortization on In-Service Additions	Retirements, Transfers & Adjustments	(a)+(b)+(c)+(d) Closing Balance	(a+e)/2 Accumulated Depreciation and Amortization Rate Base Amount
		(a)	(b)	(c)	(d)	(e)	(f)
	<b>2016 Budget:</b>						
1	Darlington NGS	375.4	31.8	4.9	0.0	412.1	393.7
2	Darlington Refurbishment Program	14.0	9.6	4.5	0.0	28.1	21.0
3	Pickering NGS	1,495.8	146.4	19.3	0.0	1,661.4	1,578.6
4	Nuclear Support Divisions <sup>1</sup>	295.8	23.8	3.0	0.0	322.6	309.2
5	Nuclear - Excluding Asset Retirement Costs	2,180.9	211.7	31.7	0.0	2,424.2	2,302.6
6	Asset Retirement Costs	1,570.8	50.3	0.0	0.0	1,621.1	1,596.0
7	<b>Total</b>	<b>3,751.7</b>	<b>261.9</b>	<b>31.7</b>	<b>0.0</b>	<b>4,045.4</b>	<b>3,898.5</b>
	<b>2017 Plan:</b>						
8	Darlington NGS	412.1	39.9	4.3	0.0	456.4	434.2
9	Darlington Refurbishment Program	28.1	19.2	6.5	0.0	53.9	41.0
10	Pickering NGS	1,661.4	185.3	14.6	0.0	1,861.3	1,761.4
11	Nuclear Support Divisions <sup>1</sup>	322.6	24.3	2.4	0.0	349.3	336.0
12	Nuclear - Excluding Asset Retirement Costs	2,424.2	268.8	27.8	0.0	2,720.8	2,572.5
13	Asset Retirement Costs	1,621.1	50.3	0.0	0.0	1,671.4	1,646.3
14	<b>Total</b>	<b>4,045.4</b>	<b>319.1</b>	<b>27.8</b>	<b>0.0</b>	<b>4,392.2</b>	<b>4,218.8</b>
	<b>2018 Plan:</b>						
15	Darlington NGS	456.4	47.3	4.1	0.0	507.7	482.0
16	Darlington Refurbishment Program	53.9	29.7	0.1	0.0	83.7	68.8
17	Pickering NGS	1,861.3	209.5	13.7	0.0	2,084.5	1,972.9
18	Nuclear Support Divisions <sup>1</sup>	349.3	22.5	1.6	0.0	373.4	361.3
19	Nuclear - Excluding Asset Retirement Costs	2,720.8	309.0	19.5	0.0	3,049.3	2,885.0
20	Asset Retirement Costs	1,671.4	50.3	0.0	0.0	1,721.7	1,696.5
21	<b>Total</b>	<b>4,392.2</b>	<b>359.3</b>	<b>19.5</b>	<b>0.0</b>	<b>4,770.9</b>	<b>4,581.6</b>
	<b>2019 Plan:</b>						
22	Darlington NGS	507.7	53.0	3.9	0.0	564.6	536.1
23	Darlington Refurbishment Program	83.7	30.0	0.0	0.0	113.7	98.7
24	Pickering NGS	2,084.5	226.2	0.4	0.0	2,311.2	2,197.8
25	Nuclear Support Divisions <sup>1</sup>	373.4	18.7	1.4	0.0	393.5	383.4
26	Nuclear - Excluding Asset Retirement Costs	3,049.3	327.9	5.7	0.0	3,383.0	3,216.1
27	Asset Retirement Costs	1,721.7	50.3	0.0	0.0	1,771.9	1,746.8
28	<b>Total</b>	<b>4,770.9</b>	<b>378.2</b>	<b>5.7</b>	<b>0.0</b>	<b>5,154.9</b>	<b>4,962.9</b>
	<b>2020 Plan:</b>						
29	Darlington NGS	564.6	58.6	4.1	0.0	627.3	595.9
30	Darlington Refurbishment Program	113.7	30.0	129.1	0.0	272.9	193.3
31	Pickering NGS	2,311.2	224.8	8.5	0.0	2,544.4	2,427.8
32	Nuclear Support Divisions <sup>1</sup>	393.5	17.3	2.2	0.0	413.0	403.2
33	Nuclear - Excluding Asset Retirement Costs	3,383.0	330.7	143.9	0.0	3,857.5	3,620.2
34	Asset Retirement Costs	1,771.9	50.3	0.0	0.0	1,822.2	1,797.1
35	<b>Total</b>	<b>5,154.9</b>	<b>381.0</b>	<b>143.9</b>	<b>0.0</b>	<b>5,679.7</b>	<b>5,417.3</b>
	<b>2021 Plan:</b>						
36	Darlington NGS	627.3	66.2	2.9	0.0	696.4	661.8
37	Darlington Refurbishment Program	272.9	177.6	0.0	0.0	450.5	361.7
38	Pickering NGS <sup>2</sup>	2,544.4	2.3	50.8	0.0	2,597.5	2,571.0
39	Nuclear Support Divisions <sup>1</sup>	413.0	18.1	1.5	0.0	432.5	422.8
40	Nuclear - Excluding Asset Retirement Costs	3,857.5	264.2	55.3	0.0	4,177.0	4,017.2
41	Asset Retirement Costs	1,822.2	18.7	0.0	0.0	1,840.9	1,831.6
42	<b>Total</b>	<b>5,679.7</b>	<b>282.9</b>	<b>55.3</b>	<b>0.0</b>	<b>6,017.9</b>	<b>5,848.8</b>

Notes:

- Includes support divisions within nuclear accountable for providing specialized services (e.g. Nuclear Engineering, Inspection and Maintenance Services).
- Pickering in-service additions (other than for minor fixed assets assumed to be transferrable to other parts of OPG's regulated operations) in 2021 are shown as fully depreciated in 2021, in line with the current December 31, 2020 end-of-life date for the stations, as discussed in Ex. F4-1-1 section 3.2.

Numbers may not add due to rounding.

Filed: 2016-05-27  
EB-2016-0152  
Exhibit B3  
Tab 5  
Schedule 1  
Table 1

Table 1  
Working Capital Summary - Nuclear (\$M)  
Years Ending December 31, 2013 to 2021

Line No.	Working Capital Item	Opening Balance	Closing Balance	(a+b)/2 Rate Base Value
		(a)	(b)	(c)
	<b>2013 Actual<sup>1</sup>:</b>			
1	Cash Working Capital	N/A	N/A	32.0
2	Fuel Inventory	327.4	333.8	330.6
3	Materials & Supplies	410.5	416.4	413.5
4	<b>Total</b>			776.1
	<b>2014 Actual:</b>			
5	Cash Working Capital	N/A	N/A	9.3
6	Fuel Inventory	333.8	298.5	316.1
7	Materials & Supplies	416.4	425.3	420.8
8	<b>Total</b>			746.3
	<b>2015 Actual:</b>			
9	Cash Working Capital	N/A	N/A	11.0
10	Fuel Inventory	298.5	304.3	301.4
11	Materials & Supplies	425.3	428.2	426.7
12	<b>Total</b>			739.1
	<b>2016 Budget:</b>			
13	Cash Working Capital	N/A	N/A	11.0
14	Fuel Inventory	304.3	256.3	280.3
15	Materials & Supplies	428.2	449.1	438.7
16	<b>Total</b>			730.0
	<b>2017 Plan:</b>			
17	Cash Working Capital	N/A	N/A	11.0
18	Fuel Inventory	256.3	247.5	251.9
19	Materials & Supplies	449.1	448.2	448.7
20	<b>Total</b>			711.5
	<b>2018 Plan:</b>			
21	Cash Working Capital	N/A	N/A	11.0
22	Fuel Inventory	247.5	237.0	242.2
23	Materials & Supplies	448.2	440.9	444.5
24	<b>Total</b>			697.7
	<b>2019 Plan:</b>			
25	Cash Working Capital	N/A	N/A	11.0
26	Fuel Inventory	237.0	211.4	224.2
27	Materials & Supplies	440.9	431.7	436.3
28	<b>Total</b>			671.5
	<b>2020 Plan:</b>			
29	Cash Working Capital	N/A	N/A	11.0
30	Fuel Inventory	211.4	209.9	210.7
31	Materials & Supplies	431.7	422.3	427.0
32	<b>Total</b>			648.7
	<b>2021 Plan:</b>			
33	Cash Working Capital	N/A	N/A	11.0
34	Fuel Inventory	209.9	207.2	208.6
35	Materials & Supplies	422.3	407.6	415.0
36	<b>Total</b>			634.5

Notes:

1 2013 Actual from EB-2013-0321 Ex. L-1.0-1, Staff-002, Att. 1, Table 4