

## THIRD IMPACT STATEMENT

### 1.0 PURPOSE

The purpose of this exhibit is to reflect the impact of material changes made to the regulation governing the rate smoothing proposal in this application. This evidence sets out a revised rate smoothing proposal in accordance with O. Reg. 53/05 (the "Regulation") as amended on March 2, 2017.<sup>1</sup> The regulatory changes impact the rate smoothing evidence (section 2 of Ex. A1-3-3), with consequential impacts on OPG's deferral and variance accounts (Ex. H1-1-1), Revenue Requirement Work Form (Ex. I1-1-1, Attachment 1), consumer impact evidence (Ex. I1-1-2) and Nuclear Payment Amounts (Ex. I1-3-1).

Consistent with the previously filed Impact Statements (Ex. N1-1-1 and Ex. N2-1-1), OPG has consolidated the relevant updates to its evidence in this exhibit.

### 2.0 OVERVIEW OF REVISED RATE SMOOTHING PROPOSAL

Before the amendments, the Regulation required smoothing the annual changes in OPG's nuclear payment amounts.<sup>2</sup> Under the amended Regulation, the objective of rate smoothing is to make more stable the total OPG weighted average payment amounts ("WAPA")<sup>3</sup> during the deferral period<sup>4</sup> by adjusting the nuclear payment amounts within the WAPA. So, while nuclear payment amounts continue to be the aspect of OPG's rates that is adjusted under the amended Regulation, the objective of those adjustments is now to produce a more stable change in the total OPG WAPA. These adjustments to the nuclear payment amounts ultimately determine the annual amounts of nuclear revenue requirement to be deferred and recorded in the rate smoothing deferral account ("RSDA") established pursuant to the Regulation.

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<sup>1</sup> A copy of the amended Regulation is provided as Attachment 1 to this schedule.

<sup>2</sup> As described in Ex. A1-3-3, Section 2.0.

<sup>3</sup> The WAPA includes both hydroelectric and nuclear payment amounts and payment riders. Section 0.1(1) of the amended O. Reg. 53/05 prescribes how WAPA is to be calculated.

<sup>4</sup> As defined in s. 0.1(1) of O. Reg. 53/05, the deferral period is "the period beginning on January 1, 2017, and ending when the Darlington Refurbishment Project ends".

1 Under the amended Regulation, rate smoothing continues to be directed at managing the  
2 annual impact on customers during the deferral period. Absent smoothing, the rate impact  
3 and volatility in the 2017-2021 period are driven by reduced production as Darlington units  
4 are taken out of service to be refurbished, partially offset by production at the Pickering  
5 generating station in 2021 due to the plan to extend operations, and costs associated with  
6 the Darlington Refurbishment Program. The amended Regulation changes the method by  
7 which nuclear revenue requirement is distributed throughout the deferral period. Relative to  
8 OPG's original proposal (Ex. A1-3-3, section 2.0), rate smoothing based on WAPA will result  
9 in a more stable year-over-year change in customers' bills, which OPG believes will benefit  
10 customers.

11  
12 Section 3.0 of this schedule provides a detailed description of the changes in the amended  
13 Regulation. Section 4.0 provides changes to the rate smoothing considerations discussed in  
14 Ex. A1-3-3, section 2.3. Section 5.0 describes the inputs into the calculation of the WAPA  
15 and the customer bill impact calculation.

16  
17 Section 6.0 sets out OPG's proposal and alternatives considered. OPG proposes that the  
18 average annual change in WAPA during the 2017 to 2021 period be 2.5% (the "smoothed  
19 rate"), which would result in a cumulative deferred revenue requirement of approximately  
20 \$1B in that period.<sup>5</sup> This proposal would result in an average annual increase of \$0.65 on the  
21 typical residential customer's monthly bill during the 2017 to 2021 period, compared to the  
22 average annual increase of \$1.05 proposed under the previous revision of the Regulation.

23  
24 Section 7.0 discusses implementation of rate smoothing, and Section 8.0 provides an update  
25 to certain interrogatories and undertakings to reflect the revised rate smoothing proposal.  
26 Section 9.0 updates the Approvals OPG is seeking, as reflected in the updated version of Ex.  
27 A1-2-2 that OPG has filed.

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<sup>5</sup> Annual deferred amounts are provided in Chart 4. The deferred amount excludes interest of approximately \$0.12B based on OPG's annual long-term debt rates as discussed in Ex. C1-1-2.

**3.0 AMENDED REQUIREMENTS OF O. REG. 53/05**

The amended O. Reg. 53/05, s. 6(2) subparagraph 12(i) states:

“the Board shall determine the portion of the Board-approved revenue requirement for the nuclear facilities for each year that is to be recorded in the deferral account established under subsection 5.5 (1), **with a view to making more stable the year-over-year changes in the OPG weighted average payment amount [WAPA] over each calculation period.**”  
[emphasis added]

The calculation of OPG’s WAPA is described in section 3.1 below.

The “calculation period” is defined in s. 0.1(1) of the Regulation as:

“each period for which the Board determines the approved revenue requirements under subparagraph 12 ii of subsection 6 (2) together with the year immediately prior to that period”

Subparagraph 12(ii) of subsection 6(2) of the Regulation was not amended and continues to require that the OEB determine nuclear revenue requirements and amounts to be deferred on a five-year basis for the first 10 years of the deferral period (2017-2026). There were no changes to the terms of the RSDA from the previous revision of the Regulation.

**3.1 Calculation of Weighted Average Payment Amount (WAPA)**

Section 0.1(1) of the Regulation defines OPG’s WAPA for a year through the following formula:

$$\frac{((\text{NPA} + \text{NPR}) \times \text{NPF}) + ((\text{HPA} + \text{HPR}) \times \text{HPF})}{(\text{NPF} + \text{HPF})}$$

**NPA** (**Nuclear Payment Amount**) is the Board-approved payment amount for the year in respect of the nuclear facilities

**NPR** (**Nuclear Payment Riders**) is the Board-approved payment amount rider for the year in respect of the recovery of balances recorded in the deferral accounts and variance accounts established for the nuclear facilities, excluding the RSDA

**NPF** (**Nuclear Production Forecast**) is the Board-approved production forecast for the nuclear facilities for the year

**HPA (Hydroelectric Payment Amount)** is the Board-approved payment amount for the year, or the expected payment amount resulting from a Board-approved rate-setting formula, as applicable, in respect of the [prescribed] hydroelectric facilities

**HPR (Hydroelectric Payment Riders)** is the Board-approved payment amount rider for the year in respect of the recovery of balances recorded in the deferral accounts and variance accounts established for the hydroelectric facilities

**HPF (Hydroelectric Production Forecast)** is the Board-approved production forecast for the hydroelectric facilities for the year

The NPR, NPF, HPA, and HPR are collectively referred to as the “inputs” in this evidence, since they are the values that the OEB must approve in this application in order to determine the annual amounts of nuclear revenue requirement to be recorded in the RSDA for the 2017-2021 period. While the NPA is also approved by the OEB, it is an output (rather than an input) of the prescribed formula since it will reflect the annual deferral of nuclear revenue requirement. As described in section 5.0 below, HPF reflects the average annual production forecast approved by the OEB in EB-2013-0321.

Each of the following steps is necessary in order to determine the amounts to be deferred in the RSDA:

1

Step	Action	Basis in O. Reg. 53/05
1	Establish the RSDA	s. 5.5(1)
2	Approve annual nuclear revenue requirements for five year term, absent any deferral	s. 5.5(1)(a) s. 6(2)12(ii) s. 6(2)12(iii)
3	Approve required WAPA inputs for each year	
4	Determine the annual change in the WAPA, applying considerations listed in sections 4.0 and 6.0 of this evidence (including impact on customer bills) to assess options with a view to making more stable the year-over-year changes in the WAPA over each calculation period ("Smoothed WAPA Rate")	s. 0.1(1) s. 6(2)12(i)
5	Using the Smoothed WAPA Rate determined in Step 4 and the inputs approved in Step 3, determine the annual NPA	s. 0.1(1)
6	Determine annual deferred amount to be recorded in RSDA for each year of the five year term [Step 2 - (NPA x NPF)]	s. 5.5(1)(b) s. 6(2)12(i)

2

3

#### 4.0 RATE SMOOTHING CONSIDERATIONS

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6 In section 2.3 of Ex. A1-3-3, OPG identified and defined the six considerations that informed  
7 its rate smoothing proposal:

8

##### FINANCIAL PERFORMANCE

10 1. Financial Viability

##### CUSTOMER FOCUS

12 2. Rate Stability

13 3. Long-term Perspective

14 4. Post-Recovery Transition

15 5. Intergenerational Equity

16 6. Customer Bill Impact

17

These considerations continue to apply to smoothing based on WAPA.

OPG believes that these considerations continue to provide an appropriate lens through which to consider potential rate smoothing scenarios. OPG has attempted to balance these considerations in producing a revised rate smoothing proposal that is consistent with the amended Regulation, the objectives of the OEB, and the outcomes identified in the Renewed Regulatory Framework for Electricity Distributors ("RRFE").<sup>6</sup>

## 5.0 INPUTS TO RATE SMOOTHING

As discussed in sections 3.0 and 3.1 above, the OEB must determine the inputs to OPG's WAPA as defined in the Regulation before it can determine the amounts of revenue requirement to defer each year of the 2017-2021 period. This section identifies the values for the inputs to be determined in this Application.

The nuclear revenue requirements and production forecasts (NPF) proposed in this application are summarized in Chart 1 below. The nuclear revenue requirements reflect updates in Ex. N1-1-1 and Ex. N2-1-1.

**Chart 1: Nuclear Revenue Requirements and Production**

	2017	2018	2019	2020	2021
<b>Proposed Revenue Requirement (\$M)</b>	\$ 3,161	\$ 3,186	\$ 3,273	\$ 3,783	\$ 3,398
<b>Forecast Production (TWh)</b>	38.1	38.5	39.0	37.4	35.4

**Hydroelectric Payment Amount (HPA):** Pursuant to the Regulation, OPG has calculated WAPA using the HPA proposed for 2017, escalated by the proposed price-cap index throughout the 2018-2021 period. Based on the proposed 2017 hydroelectric rate escalated by 1.5% per year, the amounts used are as set out in Ex. I1-2-1 Table 1: \$41.71/MWh

<sup>6</sup> *Ontario Energy Board Act, 1998*, section 1(1), in particular, "to protect the interests of consumers with respect to prices" and "to facilitate the maintenance of a financially viable electricity industry". OPG considered the RRFE objectives of Customer Focus and Financial Performance relevant to the setting of smoothed rates.

(2017); \$42.33/MWh (2018); \$42.97/MWh (2019); \$43.61/MWh (2020); and \$44.27/MWh (2021).

**Nuclear Payment Rider (NPR) and Hydroelectric Payment Rider (HPR):** To calculate WAPA, OPG has used the hydroelectric and nuclear payment riders as proposed for 2017 and 2018 in Ex. H1-2-1: \$1.44/MWh and \$2.85/MWh, respectively. No riders are reflected for 2019-2021, as none are proposed in this Application. Any payment riders the OEB may establish for that period would be separate from the rate smoothing proposal and would not affect the revenue requirement deferral amounts approved by the OEB in this proceeding.

**Determination of Annual Change in WAPA:** Pursuant to the Regulation, the calculation period in this application is 2016-2021. OPG calculates WAPA for each year in the calculation period as demonstrated in Ex. N3-1-1 Table 2.

**Total OPG Regulated Production:** Per the Regulation, OPG arrived at the 2016 weighted average payment amount using the average of the 2014 and 2015 OEB approved production.<sup>7</sup> For 2017 onward, OPG has utilized the proposed nuclear production forecast<sup>8</sup> and the average of the 2014 and 2015 OEB approved hydroelectric production.<sup>9</sup>

### 5.1 Post-2021 Projections used in Smoothing Analysis

Since payment amounts set for 2017 will have implications for the rates set later in the deferral and recovery periods, an understanding of forecast nuclear costs and production for the entire deferral and recovery period is necessary context for the revised rate smoothing proposal.<sup>10</sup> While it is not possible to forecast revenue requirement and productions out 20 years with a high degree of accuracy, Chart 2 provides OPG's view of the approximate longer-term nuclear revenue requirements and production, along with indicative average

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<sup>7</sup> See Ex. N3-1-1 Table 2 Note 3.

<sup>8</sup> Ex. E2-1-1 Table 1.

<sup>9</sup> 33 TWh, per EB-2013-0321, Decision with Reasons, November 20, 2014, p. 9.

<sup>10</sup> As discussed in section 2.0, rate smoothing is primarily driven by variations in nuclear costs and production during the deferral period. Therefore the rate smoothing analysis in this evidence is based on stable hydroelectric production and hydroelectric payment amount escalation at the proposed price-cap index throughout the deferral and recovery periods.

nuclear rates that would result for the 2021-2036 period without smoothing, in nominal dollars.

**Chart 2: Nuclear Revenue Requirement, Production and Average Rate**

	2017-2021	2022-2026	2027-2031	2032-2036
<b>Anticipated Revenue Requirement (\$BN)</b>	\$ 16.8	\$ 18.1	\$ 18.2	\$ 17.1
<b>Anticipated Production (TWh)</b>	188	130	136	141
<b>Average Rate (\$/MWh)</b>	\$ 89	\$ 139	\$ 135	\$ 121

The average rate (absent rate smoothing) for the 2032 to 2036 period reflects both the planned completion of the DRP and assumed completion of activities and costs associated with the planned end of commercial operations at Pickering. OPG believes that the average forecast 2032 to 2036 NPA is a reasonable proxy for the rate that will prevail after the cost deferral and recovery cycle. To minimize the impact of transitioning to non-smoothed rates after the RSDA is recovered, the final NPA in the recovery period should be similar to the post-transition rate (i.e., approximately \$120/MWh forecast above). The transition impact in Chart 3 compares the projected 2036 NPA under the rate smoothing scenarios against the post-transition nuclear rate in 2036.

The Regulation requires the OEB to authorize recovery of the balance in the RSDA over a period not to exceed ten years.<sup>11</sup> As the magnitude of the costs being deferred is in the billions of dollars, OPG's revised smoothing proposal continues to assume that the RSDA balance is recovered over the maximum ten-year period.

## **5.2 Customer Bill Impact Calculation**

OPG has determined the annualized residential consumer impact on a basis that is consistent with both previous OEB proceedings and with the approach taken in the pre-filed evidence. The updated calculation of the annualized impact reflects the current proposed 2017-2021 nuclear revenue requirement and revisions to O. Reg. 53/05. The annualized residential customer impact is determined by multiplying the year-over-year change in

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<sup>11</sup> O. Reg. 53/05 section 6 (2), subparagraph 12 (iii).



WAPA<sup>12</sup> by the proportion that OPG production comprises of a typical residential customer's consumption in the year.<sup>13</sup> Ex. N3-1-1 Tables 1 and 2 provide the computation of these impacts for 2017 through 2021. OPG used the inputs described below to calculate the consumer impacts, consistent with the pre-filed evidence:

**Typical residential consumption:** 789 kWh is based on the typical monthly consumption (750 kWh) in the OEB "Bill Calculator" for estimating monthly electricity bills (using Time of Use pricing), available at:  
<http://www.ontarioenergyboard.ca/OEB/Consumers/Electricity/Your+Electricity+Utility>.

Typical Consumption includes line losses (Assumed loss factor of 1.0525).

**Typical residential bill:** \$150.58 is taken from the OEB "Bill Calculator" for estimating monthly electricity bills (using Time of Use pricing), available at:  
<http://www.ontarioenergyboard.ca/OEB/Consumers/Electricity/Your+Electricity+Utility>.

OPG runs this bill calculator tool for all local distribution companies available in the bill calculator and uses a simple average of all of the bills as the typical bill.

**Forecast of 2017 Provincial Demand:** Based on forecast demand for 2017 (137.6 TWh) from Table 3.1 of IESO 18-Month Outlook Update for April 2016 to September 2017, published on March 22, 2016.

## 6.0 PROPOSAL AND ALTERNATIVE RATE SMOOTHING SCENARIOS

Following the amendments to the Regulation, OPG identified a range of scenarios that produce a more stable WAPA (and, by extension, more stable customer bill impacts). These scenarios are set out in Chart 3, below. As a threshold, OPG determined that it would not consider scenarios that increased the forecast cost of rate smoothing (i.e., the cumulative

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<sup>12</sup> N3-1-1 Table 1, line 8.

<sup>13</sup> N3-1-1 Table 1, line 2.

1 interest amount over the deferral and recovery periods) relative to the company's proposal  
2 under the previous revision of the Regulation.

3  
4 Since the OEB is not approving payment amounts or RSDA deferral amounts beyond 2021  
5 in this application, Chart 3 includes illustrative trends for OPG's WAPA and the average year-  
6 over-year change in a typical residential customer's monthly bill throughout the 20-year  
7 deferral and recovery period. Chart 3 also includes the approximate peak RSDA account  
8 balance, the credit metrics associated with each option, and the final smoothed rate at the  
9 end of the recovery period. As with the scenarios originally presented in Ex. A1-3-3 Chart 3,  
10 the actual trajectory of payment amounts will depend on the OEB's decisions throughout the  
11 remainder of the deferral and recovery periods.

12  
13 For reference, Chart 3 also includes the original 11% nuclear payment amount smoothing  
14 proposal filed in Ex. A1-3-3, updated to reflect current nuclear revenue requirement amounts  
15 (per the first and second impact statements, Ex. N1-1-1 and Ex. N2-1-1).

1 **Chart 3: Proposed and Alternative Rate Smoothing Scenarios**

	Original 11% Proposal <sup>1</sup>	A	B (Proposed)	C	D	E
2017-2021 Average Annual Change in WAPA	4.3%	2.0%	2.5%	3.0%	3.5%	4.0%
2022-2026 Average Annual Change in WAPA <sup>2</sup>	6.9%	8.3%	7.0%	5.7%	4.3%	3.0%
2027-2036 Average Annual Change in WAPA <sup>2</sup>	(1.9)%	(1.5)%	(1.0)%	(0.3)%	0.5%	1.2%
Peak RSDA Balance (\$B)	\$3.3	\$3.2	\$2.9	\$3.0	\$3.2	\$3.4
Total Interest (\$B)	\$1.4	\$1.4	\$1.4	\$1.4	\$1.4	\$1.4
Interest Cost / Deferred Revenue Ratio	0.5	0.5	0.5	0.5	0.5	0.4
FFO Interest Coverage > = 3 (2017-2021) / (2022-2026)	3.6 / 5.3	4.5 / 5.0	4.6 / 5.4	4.6 / 5.8	4.7 / 6.2	4.8 / 6.7
DEBT to EBITDA < = 5.5 (2017-2021) / (2022-2026)	6.2 / 5.3	5.9 / 5.3	5.9 / 5.2	5.8 / 5.0	5.8 / 4.9	5.7 / 4.7
Nuclear Payment Amount Transition Impact (\$/MWh)	(\$4.3)	\$1.0	(\$3.7)	(\$9.3)	(\$16.8)	(\$22.7)
Average Annual Bill Impact (2017-2021) in %	0.7%	0.3%	0.4%	0.5%	0.6%	0.7%
Average Annual Bill Impact (2017-2021) in \$	\$1.05	\$0.51	\$0.65	\$0.79	\$0.93	\$1.07
Average Annual Bill Impact (2017-2036) in % <sup>2</sup>	0.3%	0.3%	0.3%	0.4%	0.4%	0.4%
Average Annual Bill Impact (2017-2036) in \$ <sup>2</sup>	\$0.43	\$0.43	\$0.47	\$0.53	\$0.60	\$0.65

Notes

<sup>1</sup> Updated to reflect changes to Nuclear revenue requirement in Ex. N1-1-1 and Ex. N2-1-1. Nuclear Payment Amount smoothing is inherently more volatile than smoothing based on WAPA. This is primarily due to the impact that year-over-year production differences have on the annual WAPA, as well as the expiry of higher payment riders in effect during 2016. The average year-over-year change in the WAPA shown for the Original 11% Proposal is therefore not directly comparable with the more consistent year-over-year change in the period in the smoothing scenarios under the amended Regulation.

<sup>2</sup> Calculated assuming that hydroelectric payment amounts continue to escalate at 1.5% per year throughout the 2017-2036 period pursuant to the price-cap as proposed in Ex. I1-2-1 Table 1 and no payment riders beyond those proposed in this application.

2  
3 Based on its assessment of the alternatives above, using the considerations described in  
4 section 4.0 above, OPG proposes an average annual WAPA increase of 2.5% per year  
5 during the 2017-2021 period. This rate of increase would result in an average year-over-year  
6 increase of approximately \$0.65 on the typical residential customer's monthly bill during the  
7 2017-2021 period. The methodology by which OPG calculated customer bill impacts in  
8 Chart 3 is provided in Section 5.2 above.

9

1 OPG has calculated the nuclear payment amount (NPA) required to arrive at a 2.5%  
2 increase in WAPA in Ex. N3-1-1 Table 3.

3  
4 OPG applied the following rationales to evaluate each option for each of the assessment  
5 considerations:

6  
7 **Financial Viability (Leverage and Cash Flow Impacts):** Higher values for the  
8 FFO Adjusted Interest Coverage ratio and lower values for the Debt to EBITDA  
9 credit metric reduce financial risk to OPG. OPG's assessment was based on at  
10 least one of the two metrics cited above being within threshold at all times  
11 during each of the two 5-year deferral periods (i.e., 2017 to 2021 and 2022 to  
12 2026). All scenarios in Chart 3 meet this threshold.

13  
14 **Rate Stability:** All of the scenarios in Chart 3 result in a constant year-over-year  
15 change in WAPA within the two halves of the deferral period and within the  
16 recovery period. In each scenario, the year-over-year change in WAPA varies  
17 between the two halves of the deferral period, and again at the beginning of the  
18 recovery period. Lower variances at each of these points are better.

19  
20 **Long-Term Perspective:** The assessment was based on the size of the  
21 average year-over-year change in WAPA during the recovery period (closer to 0  
22 per cent is better).

23  
24 **Post-Recovery Transition:** The assessment was based on the size of the  
25 change in the nuclear payment amount at the end of the recovery period  
26 (smaller is better) to the forecast post-transition payment amount of  
27 approximately \$120/MWh.

28  
29 **Intergenerational Equity:** The assessment was based on the ratio of total  
30 interest costs to total amounts deferred (total interest / total amounts deferred).  
31 A lower ratio implies a lower cost of deferring revenue under that alternative.

1 Intergenerational equity involves striking a balance between the benefits of  
2 deferring revenue and the costs of the deferral; therefore OPG's assessment  
3 placed value on a ratio that best reflects this balance (i.e., neither the highest  
4 nor the lowest ratio).

5  
6 **Customer Bill Impact:** Each scenario was assessed based on the resulting  
7 average year-over-year change in a typical residential customer's monthly bill,  
8 both in the 2017-2021 period and over the full deferral and recovery periods.  
9

10 In OPG's assessment, Scenario B results in the best overall balance based on the  
11 application of the above considerations. While Scenarios A, B, and C each perform well on  
12 several considerations, Scenario B best balances the considerations outlined above.  
13 Scenario A has the steepest rate change in the recovery period and the least stable WAPA in  
14 2022 and 2027, and although Scenario C produces a smaller change in WAPA between the  
15 two halves of the deferral period, it also produces less optimal results than Scenario B in  
16 terms of bill impact and the transition rate. Scenario B also produces the lowest peak RSDA  
17 balance. Overall, Scenario B best addresses the considerations and reflects the best overall  
18 proposal.  
19

20 Relative to OPG's proposal under the previous version of the Regulation, the main benefit of  
21 the revised proposal is a significantly lower average annual bill impact in the 2017-2021  
22 period. Under the previous proposal, the annual average of year-over-year increases in  
23 customers' monthly bills over the period was forecast at approximately \$1.05, as opposed to  
24 a less variable \$0.65 under the revised proposal.  
25

26 Under the revised proposal, OPG expects that the rate of change in the company's WAPA  
27 will be different between the first and second halves of the deferral period. However the  
28 average annual rate of change in WAPA is expected to be consistent within each five-year  
29 period, meaning that the proposal would result in a consistent rate of increase during the  
30 deferral period (except for the transition between 2021 and 2022) and a consistent average  
31 annual decrease in WAPA during the recovery period.

OPG's proposal results in deferring the collection of approximately \$1B in revenue in the 2017 to 2021 period, as reflected in Chart 4 below. This is approximately \$0.4B less than OPG proposed to defer under the previous proposal (after adjustments to account for the reduced nuclear revenue requirement in the previous impact statements). The nuclear payment amounts have been updated based on the level of deferred recovery associated with this proposal.

**Chart 4: OPG Proposed Deferred Revenue Requirement**

	2017	2018	2019	2020	2021	Total
<b>Proposed Revenue Requirement (\$M)</b>	\$ 3,161	\$ 3,186	\$ 3,273	\$ 3,783	\$ 3,398	\$ 3,617
<b>Forecast Production (TWh)</b>	38.10	38.47	39.03	37.36	35.38	26.01
<b>Smoothed Rate (\$/MWh)</b>	\$ 76.39	\$ 78.60	\$ 84.83	\$ 88.21	\$ 92.02	N/A
<b>Smoothed Revenue (\$M)</b>	\$ 2,910	\$ 3,024	\$ 3,311	\$ 3,295	\$ 3,256	\$ 15,796
<b>Deferred Revenue Requirement (\$M)</b>	\$ 251	\$ 162	\$ (38)	\$ 488	\$ 142	\$ 1,005

## **7.0 IMPLEMENTATION**

The specific revenue requirement deferral amounts proposed in section 6.0 are produced by adjusting the approved nuclear payment amounts to achieve the desired annual rate of change in the total WAPA. The OEB's findings on the proposed nuclear revenue requirements, nuclear production forecast, hydroelectric and nuclear payment riders and the hydroelectric IRM formula will necessarily impact the 2017-2021 NPA, the annual deferred nuclear revenue requirement, and the resulting WAPA.

Nuclear rate smoothing is unique in terms of the magnitude of the proposed deferred amounts, and the number of interrelated decisions required. To the extent the OEB's decision changes the rate smoothing inputs, it may be expedient for the OEB to make a decision on the nuclear revenue requirements and the inputs (steps 2 and 3 of the chart in section 3.1 above), and withhold its final decision on the "outputs" (i.e., the annual change in WAPA, the resulting nuclear payment amount, and the amount to be deferred in the RSDA) until the Payment Amount Order approval process (steps 4, 5 and 6).

1 If the OEB defers its determination of the outputs to the Payment Amount Order approval  
2 process, OPG could apply the OEB's findings on the inputs and the considerations listed in  
3 sections 4.0 and 6.0 at that time. OPG could provide requested options for the NPA, the  
4 annual nuclear deferred revenue requirement and the resulting WAPA in the same format  
5 and level of detail as Chart 3.

## 6 7 **8.0 UPDATED TABLES, INTERROGATORY RESPONSES AND UNDERTAKINGS**

8 This schedule includes revised version of three tables from Exhibit I, updated as necessary  
9 to be consistent with the changes to the Regulation and OPG's proposal:

- 10 • **Table 1:** Annualized Residential Consumer Impact (updated Ex. I1-1-2 Table 1)
- 11 • **Table 2:** Computation of Percent Change in Payment Amounts (updated Ex. I1-1-2  
12 Table 2)
- 13 • **Table 3:** Payment Amounts and Riders – Nuclear (updated Ex. I1-3-1 Table 1)

14  
15 Given the late stage of the proceeding in which the Regulation was amended, and in order to  
16 facilitate an efficient and timely hearing process, OPG has identified certain interrogatories  
17 and technical conference undertakings seeking quantitative analyses related to the rate  
18 smoothing proposal, and has provided updated responses to these questions in  
19 Attachment 2 to this schedule.

20  
21 Attachment 3 is an updated Revenue Requirement Work Form ("RRWF") originally filed as  
22 Ex. I1-1-1, Attachment 1. The revised RRWF has been adjusted to reflect the customer bill  
23 impact changes resulting from the revised smoothing proposal. Updated rows are marked.  
24 OPG has also filed a live Excel version of the revised RRWF.

## 25 26 **9.0 SUMMARY OF CHANGES IN APPROVALS SOUGHT**

27 The items identified in this Impact Statement result in amendments to the following approvals  
28 sought by OPG in this Application for the IR period: (i) payment amounts for the nuclear  
29 facilities, and (ii) the portion of the annual nuclear revenue requirements deferred under rate  
30 smoothing during the 2017 to 2021 period.

The updated approvals are detailed below. Along with this schedule, OPG has filed an amendment to Ex. A1-2-2 to reflect these changes.

Nuclear Payment Amounts

Effective Date	Payment Amount
January 1, 2017	\$76.39/MWh
January 1, 2018	\$78.60/MWh
January 1, 2019	\$84.83/MWh
January 1, 2020	\$88.21/MWh
January 1, 2021	\$92.02/MWh

Deferred Revenue Requirement Amounts

OPG proposes that annual OPG weighted average payment amounts (as defined by O. Reg. 53/05, s. 0.1(1)) reflect a constant 2.5% per year rate increase during the 2017 to 2021 period resulting in a deferred nuclear revenue requirement of \$251M, \$162M, \$(38)M, \$488M, and \$142M in 2017, 2018, 2019, 2020 and 2021, respectively.



**ATTACHMENTS**

Attachment 1: O. Reg. 53/05 as amended March 2, 2017

Attachment 2: Updated Rate Smoothing Interrogatory Responses and Undertakings

Attachment 3: Updated Revenue Requirement Work Form

Numbers may not add due to rounding.

Filed: 2017-03-08  
EB-2016-0152  
Exhibit N3  
Tab 1  
Schedule 1  
Table 1

Table 1  
Annualized Residential Consumer Impact  
(Updated Ex.11-1-2 Table 1)  
EB-2013-0321 / EB-2014-0370 to EB-2016-0152

Line No.	Description	2017 Amount	2018 Amount	2019 Amount	2020 Amount	2021 Amount
		(a)	(b)	(c)	(d)	(e)
1	Typical Consumption <sup>1</sup> (kWh/Month)	789	789	789	789	789
2	Typical Usage of OPG Generation (kWh/Month) (line 1 x line 11)	408	410	413	403	392
3	Typical Bill <sup>1</sup> (\$/Month)	150.58	150.58	150.58	150.58	150.58
4	Typical Bill Impact (\$/Month) (line 2 x line 8 / 1000)	0.62	0.64	0.66	0.66	0.66
5	Typical Bill Impact (%) (line 4 / line 3)	0.4%	0.4%	0.4%	0.4%	0.4%
6	Prior Year weighted average rate with proposed payment amounts and riders <sup>2,3</sup> (\$/MWh)	60.97	62.50	64.06	65.66	67.30
7	Current Year weighted average rate with proposed payment amounts and riders <sup>2,3</sup> (\$/MWh)	62.50	64.06	65.66	67.30	68.98
8	Change in OPG weighted average rate (\$/MWh) (line 7 - line 6)	1.52	1.56	1.60	1.64	1.68
9	Total OPG Regulated Production <sup>4</sup> (TWh)	71.1	71.4	72.0	70.3	68.4
10	Forecast of 2017 Provincial Demand <sup>5</sup> (TWh)	137.6	137.6	137.6	137.6	137.6
11	OPG Proportion of Consumer Usage (line 9 / line 10)	51.7%	51.9%	52.3%	51.1%	49.7%

Notes:

- 1 Typical monthly consumption (750 kWh) and typical monthly bill are based on the OEB "Bill Calculator" for estimating monthly electricity bills (using Time of Use pricing), available at: <http://www.ontarioenergyboard.ca/OEB/Consumers/Electricity/Your+Electricity+Utility>  
Typical Consumption includes line losses (Assumed loss factor of 1.0525)
- 2 From Ex. N3-1-1 Table 2, line 8
- 3 Uses Nuclear smoothed rate per Ex. N3-1-1 Table 3, IRM Hydro rate (illustrative after 2017) per Ex. I1-2-1 Table 1
- 4 From Ex.N3-1-1 Table 2, line 5.
- 5 Based on forecast demand for 2017 (137.6 TWh) from Table 3.1 of IESO 18-Month Outlook Update for April 2016 to September 2017, published March 22, 2016.

Numbers may not add due to rounding.

Filed: 2017-03-08  
EB-2016-0152  
Exhibit N3  
Tab 1  
Schedule 1  
Table 2

Table 2  
Computation of Percent Change in Payment Amounts  
(Updated Ex.11-1-2 Table 2)  
EB-2013-0321 / EB-2014-0370 to EB-2016-0152

Line No.	Description	Note	2016 per EB-2013-0321 Payment Amounts Order plus EB-2014-0370 Riders	2017 per EB-2016-0152 Proposed Payment Amount plus EB-2016-0152 Riders	2018 per EB-2016-0152 Proposed Payment Amount plus EB-2016-0152 Riders	2019 per EB-2016-0152 Proposed Payment Amount	2020 per EB-2016-0152 Proposed Payment Amount	2021 per EB-2016-0152 Proposed Payment Amount
			(a)	(b)	(c)	(d)	(e)	(f)
1	Regulated Hydroelectric Rate Including Rider (\$/MWh)	1	44.55	43.15	43.77	42.97	43.61	44.27
2	Nuclear Rate Including Rider (\$/MWh)	2	72.30	79.24	81.45	84.83	88.21	92.02
3	Regulated Hydroelectric Production (TWh)	3	33.0	33.0	33.0	33.0	33.0	33.0
4	Forecast Nuclear Production (TWh)	3	47.8	38.1	38.5	39.0	37.4	35.4
5	Total Production (TWh) (line 3 + line 4)		80.8	71.1	71.4	72.0	70.3	68.4
7	Regulated Hydroelectric Portion of Production-Weighted Average Rate (\$/MWh) (line 1 x line 3 / line 5)		18.19	20.02	20.20	19.68	20.45	21.35
6	Nuclear Portion of Production-Weighted Average Rate (\$/MWh) (line 2 x line 4 / line 5)		42.78	42.48	43.86	45.98	46.85	47.63
8	Total Production-Weighted Average Rate (\$/MWh) (line 6 + line 7 )		60.97	62.50	64.06	65.66	67.30	68.98
9	Percentage Change in Hydroelectric Rate Including Rider	4		-3.2%	1.4%	-1.8%	1.5%	1.5%
10	Percentage Change in Nuclear Rate Including Rider	4		9.6%	2.8%	4.2%	4.0%	4.3%
11	Percentage Change in Overall Payment Amount			2.5%	2.5%	2.5%	2.5%	2.5%

- Notes:
- Col. (a) is average Regulated Hydroelectric payment amount including riders for Jul-Dec 2015 (production-weighted average of previously and newly regulated hydroelectric base rates and riders in effect at the end of 2015). See Ex. 11-2-1 Table 1(a). Col. (b) - (f) is proposed EB-2016-0152 payment amount plus riders from Ex. 11-2-1 Table 1 line 10.
  - Col. (a) is base rate of \$59.29/MWh (EB-2013-0321 Payment Amounts Order, Appendix D, Table 1, line 3) plus nuclear rider 2016 from EB-2014-0370 (\$10.84/MWh) plus Nuclear Interim Period Shortfall Rider from EB-2014-0370 (\$2.17/MWh). Col. (b) - (f) is calculated as the nuclear payment amount required to each a 2.5% increase in line 11 - percentage change in overall payment amount
  - Regulated Hydroelectric production is the 2014 and 2015 average OEB approved hydroelectric production per EB-2013-0321 Decision and Order page 9  
Nuclear 2016 production is the 2014 and 2015 average OEB approved per EB-2013-0321 Decision and Order page 39. 2017-2021 from EB-2016-0152 Ex. E2-1-2\_Table 1
  - Rider included per Ex. H1-2-1 Tables 1 and 2 only - no assumptions made for future riders in the 2019-2021 period

Table 3  
Payment Amounts and Riders - Nuclear  
(Updated Ex.11-3-1 Table 1)  
Test Period January 1, 2017 to December 31, 2021

Line No.	Description	2017	2018	2019	2020	2021
		(a)	(b)	(c)	(d)	(e)
	<b>PAYMENT AMOUNT:</b>					
1	Revenue Requirement Before Stretch Factor <sup>1</sup> (\$M)	3,161.4	3,190.7	3,283.4	3,798.8	3,418.4
2	Nuclear Base OM&A <sup>2</sup>	1,218.9	1,232.0	1,271.8	1,284.8	1,297.4
3	Nuclear Allocated Corporate Costs <sup>3</sup>	448.9	437.2	442.7	445.0	454.1
4	Total OM&A Applicable for Stretch Factor <sup>4</sup>	1,667.8	1,669.2	1,714.6	1,729.8	1,751.5
5	Nuclear Stretch Factor (Ex. A1-3-2, Chart 9)		0.3%	0.3%	0.3%	0.3%
6	Cummulative Nuclear Stretch Dollars ((line 4 x line 5) + Prior Year)	-	5.0	10.2	15.3	20.6
7	Revenue Requirement Net of Stretch Factor (\$M) (line 1 - line 6)	3,161.4	3,185.7	3,273.2	3,783.5	3,397.8
8	Forecast Production <sup>5</sup> (TWh)	38.1	38.5	39.0	37.4	35.4
9	Illustrative Unsmoothed Payment Amount (\$/MWh) (line 7/line 8)	83.0	82.8	83.9	101.3	96.0
10	Customer Smoothing Payment Amount (\$/MWh) <sup>6</sup>	76.39	78.60	84.83	88.21	92.02
	<b>DEFERRAL AND VARIANCE ACCOUNT PAYMENT RIDER:</b>					
11	Payment Rider <sup>7</sup> (\$/MWh)	2.85	2.85			
12	Total of Nuclear Payment Amount Plus Riders (line 11 + line 12)	79.24	81.45	84.83	88.21	92.02

## Notes:

- 1 From Ex. I1-1-1 Table 2, line 24.
- 2 Ex. F2-1-1 Table 1 (updated for changes to CNSC requirements and ONFA waste related OM&A, per N1-1-1)
- 3 Ex. F2-1-1 Table 1
- 4 Please see section 3.2 of Ex. A1-3-2
- 5 From Ex. E2-1-1 Table 1, line 3, cols. (e) through (i).
- 6 Nuclear payment amount required to arrive at a 2.5% increase in the weighted average payment amount (see N3-1-1 Table 2)
- 7 From Ex. H1-2-1 Table 2, line 18, col (g)

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**Ontario Energy Board Act, 1998**  
**Loi de 1998 sur la Commission de l'énergie de l'Ontario**

**ONTARIO REGULATION 53/05**

**PAYMENTS UNDER SECTION 78.1 OF THE ACT**

**Consolidation Period:** From March 2, 2017 to the e-Laws currency date.

Last amendment: O. Reg. 57/17.

***This Regulation is made in English only.***

**Definition**

**0.1** (1) In this Regulation,

“approved reference plan” means a reference plan, as defined in the Ontario Nuclear Funds Agreement, that has been approved by Her Majesty the Queen in right of Ontario in accordance with that agreement;

“calculation period” means each period for which the Board determines the approved revenue requirements under subparagraph 12 ii of subsection 6 (2) together with the year immediately prior to that period;

“Darlington Refurbishment Project” means the work undertaken by Ontario Power Generation Inc. in respect of the refurbishment, in whole or in part, of some or all of the generating units of the Darlington Nuclear Generating Station;

“deferral period” means the period beginning on January 1, 2017, and ending when the Darlington Refurbishment Project ends;

“hydroelectric facilities” means the hydroelectric generation facilities prescribed in paragraphs 1, 2 and 6 of section 2;

“nuclear decommissioning liability” means the liability of Ontario Power Generation Inc. for decommissioning its nuclear generation facilities and the management of its nuclear waste and used fuel;

“nuclear facilities” means the nuclear generation facilities prescribed in paragraphs 3, 4 and 5 of section 2;

“Ontario Nuclear Funds Agreement” means the agreement entered into as of April 1, 1999 by Her Majesty the Queen in right of Ontario, Ontario Power Generation Inc. and certain subsidiaries of Ontario Power Generation Inc., including any amendments to the agreement.

“OPG weighted average payment amount” for a year means the total production-weighted average payment amount that is used in the determination of the payments made under section 78.1 of the Act with respect to the generation facilities prescribed in section 2 of this Regulation, calculated according to the formula:

$$(((NPA + NPR) \times NPF) + (HPA + HPR) \times HPF) / (NPF + HPF)$$

where,

NPA is the Board-approved payment amount for the year in respect of the nuclear facilities,

NPR is the Board-approved payment amount rider for the year in respect of the recovery of balances recorded in the deferral accounts and variance accounts established for the nuclear facilities, excluding the deferral account established under subsection 5.5 (1),

NPF is the Board-approved production forecast for the nuclear facilities for the year,

HPA is the Board-approved payment amount for the year, or the expected payment amount resulting from a Board-approved rate-setting formula, as applicable, in respect of the hydroelectric facilities,

HPR is the Board-approved payment amount rider for the year in respect of the recovery of balances recorded in the deferral accounts and variance accounts established for the hydroelectric facilities, and

HPF is the Board-approved production forecast for the hydroelectric facilities for the year.

O. Reg. 23/07, s. 1; O. Reg. 353/15, s. 1; O. Reg. 57/17, s. 1.

(2) For the purposes of this Regulation, the output of a generation facility shall be measured at the facility's delivery points, as determined in accordance with the market rules. O. Reg. 312/13, s. 1.

#### **Prescribed generator**

1. Ontario Power Generation Inc. is prescribed as a generator for the purposes of section 78.1 of the Act. O. Reg. 53/05, s. 1.

#### **Prescribed generation facilities**

2. The following generation facilities of Ontario Power Generation Inc. are prescribed for the purposes of section 78.1 of the Act:

1. The following hydroelectric generating stations located in The Regional Municipality of Niagara:

i. Sir Adam Beck I.

ii. Sir Adam Beck II.

iii. Sir Adam Beck Pump Generating Station.

iv. De Cew Falls I.

v. De Cew Falls II.

2. The R. H. Saunders hydroelectric generating station on the St. Lawrence River.

3. Pickering A Nuclear Generating Station.

4. Pickering B Nuclear Generating Station.

5. Darlington Nuclear Generating Station.

6. As of July 1, 2014, the generation facilities of Ontario Power Generation Inc. that are set out in the Schedule. O. Reg. 53/05, s. 2; O. Reg. 23/07, s. 2; O. Reg. 312/13, s. 2.

#### **Prescribed date for s. 78.1 (2) of the Act**

3. April 1, 2008 is prescribed for the purposes of subsection 78.1 (2) of the Act. O. Reg. 53/05, s. 3.

4. REVOKED: O. Reg. 312/13, s. 3.

#### **Deferral and variance accounts**

5. (1) Ontario Power Generation Inc. shall establish a variance account in connection with section 78.1 of the Act that records capital and non-capital costs incurred and revenues earned or foregone on or after April 1, 2005 due to deviations from the forecasts as set out in the document titled "Forecast Information (as of Q3/2004) for Facilities Prescribed under Ontario Regulation 53/05" posted and available on the Ontario Energy Board website, that are associated with,

- (a) differences in hydroelectric electricity production due to differences between forecast and actual water conditions;
- (b) unforeseen changes to nuclear regulatory requirements or unforeseen technological changes which directly affect the nuclear generation facilities, excluding revenue requirement impacts described in subsections 5.1 (1) and 5.2 (1);
- (c) changes to revenues for ancillary services from the generation facilities prescribed under section 2;
- (d) acts of God, including severe weather events; and
- (e) transmission outages and transmission restrictions that are not otherwise compensated for through congestion management settlement credits under the market rules. O. Reg. 23/07, s. 3.

(2) The calculation of revenues earned or foregone due to changes in electricity production associated with clauses (1) (a), (b), (d) and (e) shall be based on the following prices:

- 1. \$33.00 per megawatt hour from hydroelectric generation facilities prescribed in paragraphs 1 and 2 of section 2.
- 2. \$49.50 per megawatt hour from nuclear generation facilities prescribed in paragraphs 3, 4 and 5 of section 2. O. Reg. 23/07, s. 3.

(3) Ontario Power Generation Inc. shall record simple interest on the monthly opening balance of the account at an annual rate of 6 per cent applied to the monthly opening balance in the account, compounded annually. O. Reg. 23/07, s. 3.

(4) Ontario Power Generation Inc. shall establish a deferral account in connection with section 78.1 of the Act that records non-capital costs incurred on or after January 1, 2005 that are associated with the planned return to service of all units at the Pickering A Nuclear Generating Station, including those units which the board of directors of Ontario Power Generation Inc. has determined should be placed in safe storage. O. Reg. 23/07, s. 3.

(5) For the purposes of subsection (4), the non-capital costs include, but are not restricted to,

- (a) construction costs, assessment costs, pre-engineering costs, project completion costs and demobilization costs; and
- (b) interest costs, recorded as simple interest on the monthly opening balance of the account at an annual rate of 6 per cent applied to the monthly opening balance in the account, compounded annually. O. Reg. 23/07, s. 3.

5.1 REVOKED: O. Reg. 312/13, s. 3.

#### **Nuclear liability deferral account**

5.2 (1) Ontario Power Generation Inc. shall establish a deferral account in connection with section 78.1 of the Act that records, on and after the effective date of the Board's first order under 78.1 of the Act, the revenue requirement impact of changes in its total nuclear decommissioning liability between,

- (a) the liability arising from the approved reference plan incorporated into the Board's most recent order under section 78.1 of the Act; and
- (b) the liability arising from the current approved reference plan. O. Reg. 23/07, s. 3.

(2) Ontario Power Generation Inc. shall record interest on the balance of the account as the Board may direct. O. Reg. 23/07, s. 3.

**5.3 REVOKED:** O. Reg. 312/13, s. 3.

**Nuclear development variance account**

**5.4** (1) Ontario Power Generation Inc. shall establish a variance account in connection with section 78.1 of the Act that records, on and after the effective date of the Board's first order under section 78.1 of the Act, differences between actual non-capital costs incurred and firm financial commitments made and the amount included in payments made under that section for planning and preparation for the development of proposed new nuclear generation facilities. O. Reg. 27/08, s. 1.

(2) Ontario Power Generation Inc. shall record interest on the balance of the account as the Board may direct. O. Reg. 27/08, s. 1.

**Darlington refurbishment rate smoothing deferral account**

**5.5** (1) Ontario Power Generation Inc. shall establish a deferral account in connection with section 78.1 of the Act that records, on and after the commencement of the deferral period, the difference between,

- (a) the revenue requirement amount approved by the Board that, but for subparagraph 12 i of subsection 6 (2) of this Regulation, would have been used in connection with determining the payments to be made under section 78.1 of the Act each year during the deferral period in respect of the nuclear facilities; and
  - (b) the portion of the revenue requirement amount referred to in clause (a) that is used in connection with determining the payments made under section 78.1 of the Act, after determining, under subparagraph 12 i of subsection 6 (2) of this Regulation, the amount of the revenue requirement to be deferred for that year in respect of the nuclear facilities.
- O. Reg. 353/15, s. 2.

(2) Ontario Power Generation Inc. shall record interest on the balance of the account at a long-term debt rate reflecting Ontario Power Generation Inc.'s cost of long-term borrowing that is determined or approved by the Board from time to time, compounded annually. O. Reg. 353/15, s. 2.

**Rules governing determination of payment amounts by Board**

**6.** (1) Subject to subsection (2), the Board may establish the form, methodology, assumptions and calculations used in making an order that determines payment amounts for the purpose of section 78.1 of the Act. O. Reg. 53/05, s. 6 (1).

(2) The following rules apply to the making of an order by the Board that determines payment amounts for the purpose of section 78.1 of the Act:

1. The Board shall ensure that Ontario Power Generation Inc. recovers the balance recorded in the variance account established under subsection 5 (1) over a period not to exceed three years, to the extent that the Board is satisfied that,
  - i. the revenues recorded in the account were earned or foregone and the costs were prudently incurred, and
  - ii. the revenues and costs are accurately recorded in the account.
2. In setting payment amounts for the assets prescribed under section 2, the Board shall not adopt any methodologies, assumptions or calculations that are based upon the contracting for all or any portion of the output of those assets.



3. The Board shall ensure that Ontario Power Generation Inc. recovers the balance recorded in the deferral account established under subsection 5 (4). The Board shall authorize recovery of the balance on a straight line basis over a period not to exceed 15 years.
4. The Board shall ensure that Ontario Power Generation Inc. recovers capital and non-capital costs and firm financial commitments incurred in respect of the Darlington Refurbishment Project or incurred to increase the output of, refurbish or add operating capacity to a generation facility referred to in section 2, including, but not limited to, assessment costs and pre-engineering costs and commitments,
  - i. if the costs and financial commitments were within the project budgets approved for that purpose by the board of directors of Ontario Power Generation Inc. before the making of the Board's first order under section 78.1 of the Act in respect of Ontario Power Generation Inc., or
  - ii. if the costs and financial commitments were not approved by the board of directors of Ontario Power Generation Inc. before the making of the Board's first order under section 78.1 of the Act in respect of Ontario Power Generation Inc., if the Board is satisfied that the costs were prudently incurred and that the financial commitments were prudently made.
- 4.1 The Board shall ensure that Ontario Power Generation Inc. recovers the costs incurred and firm financial commitments made in the course of planning and preparation for the development of proposed new nuclear generation facilities, to the extent the Board is satisfied that,
  - i. the costs were prudently incurred, and
  - ii. the financial commitments were prudently made.
5. In making its first order under section 78.1 of the Act in respect of Ontario Power Generation Inc., the Board shall accept the amounts for the following matters as set out in Ontario Power Generation Inc.'s most recently audited financial statements that were approved by the board of directors of Ontario Power Generation Inc. before the effective date of that order:
  - i. Ontario Power Generation Inc.'s assets and liabilities, other than the variance account referred to in subsection 5 (1), which shall be determined in accordance with paragraph 1.
  - ii. Ontario Power Generation Inc.'s revenues earned with respect to any lease of the Bruce Nuclear Generating Stations.
  - iii. Ontario Power Generation Inc.'s costs with respect to the Bruce Nuclear Generating Stations.
6. Without limiting the generality of paragraph 5, that paragraph applies to values relating to,
  - i. capital cost allowances,
  - ii. the revenue requirement impact of accounting and tax policy decisions, and
  - iii. capital and non-capital costs and firm financial commitments to increase the output of, refurbish or add operating capacity to a generation facility referred to in section 2.
7. The Board shall ensure that the balance recorded in the deferral account established under subsection 5.2 (1) is

recovered on a straight line basis over a period not to exceed three years, to the extent that the Board is satisfied that the revenue requirement impacts are accurately recorded in the account, based on the following items, as reflected in the audited financial statements approved by the board of directors of Ontario Power Generation Inc.,

- i. return on rate base,
- ii. depreciation expense,
- iii. income and capital taxes, and
- iv. fuel expense.

7.1 The Board shall ensure the balance recorded in the variance account established under subsection 5.4 (1) is recovered on a straight line basis over a period not to exceed three years, to the extent the Board is satisfied that,

- i. the costs were prudently incurred, and
- ii. the financial commitments were prudently made.

8. The Board shall ensure that Ontario Power Generation Inc. recovers the revenue requirement impact of its nuclear decommissioning liability arising from the current approved reference plan.

9. The Board shall ensure that Ontario Power Generation Inc. recovers all the costs it incurs with respect to the Bruce Nuclear Generating Stations.

10. If Ontario Power Generation Inc.'s revenues earned with respect to any lease of the Bruce Nuclear Generating Stations exceed the costs Ontario Power Generation Inc. incurs with respect to those Stations, the excess shall be applied to reduce the amount of the payments required under subsection 78.1 (1) of the Act with respect to output from the nuclear generation facilities referred to in paragraphs 3, 4 and 5 of section 2.

11. In making its first order under section 78.1 of the Act in respect of Ontario Power Generation Inc. that is effective on or after July 1, 2014, the following rules apply:

- i. The order shall provide for the payment of amounts with respect to output that is generated at a generation facility referred to in paragraph 6 of section 2 during the period from July 1, 2014 to the day before the effective date of the order.
- ii. The Board shall accept the values for the assets and liabilities of the generation facilities referred to in paragraph 6 of section 2 as set out in Ontario Power Generation Inc.'s most recently audited financial statements that were approved by the board of directors before the making of that order. This includes values relating to the income tax effects of timing differences and the revenue requirement impact of accounting and tax policy decisions reflected in those financial statements.

12. For the purposes of section 78.1 of the Act, in setting payment amounts for the nuclear facilities during the deferral period,

- i. the Board shall determine the portion of the Board-approved revenue requirement for the nuclear facilities for each year that is to be recorded in the deferral account established under subsection 5.5 (1), with a view to making more stable the year-over-year changes in the OPG weighted average payment amount over each calculation period,

- ii. the Board shall determine the approved revenue requirements referred to in subsection 5.5 (1) and the amount of the approved revenue requirements to be deferred under subparagraph i on a five-year basis for the first 10 years of the deferral period and, thereafter, on such periodic basis as the Board determines,
- iii. for greater certainty, the Board's determination of Ontario Power Generation Inc.'s approved revenue requirement for the nuclear facilities shall not be restricted by the yearly changes in payment amounts in subparagraph i,
- iv. the Board shall ensure that Ontario Power Generation Inc. recovers the balance recorded in the deferral account established under subsection 5.5 (1), and the Board shall authorize recovery of the balance on a straight line basis over a period not to exceed 10 years commencing at the end of the deferral period, and
- v. the Board shall accept the need for the Darlington Refurbishment Project in light of the Plan of the Ministry of Energy known as the 2013 Long-Term Energy Plan and the related policy of the Minister endorsing the need for nuclear refurbishment. O. Reg. 23/07, s. 4; O. Reg. 27/08, s. 2; O. Reg. 312/13, s. 4; O. Reg. 353/15, s. 3; O. Reg. 57/17, s. 2.

7. OMITTED (PROVIDES FOR COMING INTO FORCE OF PROVISIONS OF THIS REGULATION). O. Reg. 53/05, s. 7.

#### SCHEDULE

- 1. Abitibi Canyon.
- 2. Alexander.
- 3. Aquasabon.
- 4. Arnprior.
- 5. Auburn.
- 6. Barrett Chute.
- 7. Big Chute.
- 8. Big Eddy.
- 9. Bingham Chute.
- 10. Calabogie.
- 11. Cameron Falls.
- 12. Caribou Falls.
- 13. Chats Falls.
- 14. Chenaux.
- 15. Coniston.
- 16. Crystal Falls.
- 17. Des Joachims.
- 18. Elliott Chute.
- 19. Eugenia Falls.
- 20. Frankford.
- 21. Hagues Reach.

22. Hanna Chute.
23. High Falls.
24. Indian Chute.
25. Kakabeka Falls.
26. Lakefield.
27. Lower Notch.
28. Manitou Falls.
29. Matabitchuan.
30. McVittie.
31. Merrickville.
32. Meyersberg.
33. Mountain Chute.
34. Nipissing.
35. Otter Rapid.
36. Otto Holden.
37. Pine Portage.
38. Ragged Rapids.
39. Ranney Falls.
40. Seymour.
41. Sidney.
42. Sills Island.
43. Silver Falls.
44. South Falls.
45. Stewartville.
46. Stinson.
47. Trethewey Falls.
48. Whitedog Falls.

O. Reg. 312/13, s. 5.

**ATTACHMENT 2**

**UPDATES TO INTERROGATORIES AND TECHNICAL CONFERENCE UNDERTAKINGS**

**1.0 OVERVIEW**

During the discovery process, a number of stakeholders requested additional information with respect to OPG's 11% nuclear payment amount smoothing proposal. OPG reviewed its responses in light of the amended O. Reg. 53/05 (the "Regulation") and the transition to smoothing based on OPG's weighted average payment amounts ("WAPA"). For applicable responses seeking a quantitative analysis of the financial impact of OPG's 11% nuclear payment amount smoothing proposal, this evidence either explains the impact of changing to smoothing based on WAPA, or provides an explanation of why an update is not provided.

Where indicated below, OPG has reflected the financial impacts described in Ex. N1-1-1 and Ex. N2-1-1 in the updated responses provided in this evidence. Some questions required OPG to create a hypothetical revenue requirement to respond to a scenario posed. In updating these questions, OPG has used the same hypothetical revenue requirement created for the original response, with payment amounts and bill impacts reflecting smoothing based on WAPA.

**2.0 INTERROGATORIES**

**L-1.3-1 Staff-5**

Scenario 1 is replaced by the 2.5% annual change in the WAPA proposed in Ex. N3-1-1. The average residential monthly customer bill increase is \$0.65 per year over the 2017 to 2021 period. This bill impact is provided in Ex. N3-1-1 Table 1, line 4 and Ex. N3-1-1 Attachment 1, Table 1.

Scenario 2 is replaced by a 3.98% annual change in the WAPA that would recover the entire proposed nuclear revenue requirement for the 2017 to 2021 period, updated for Ex. N1-1-1 and Ex. N2-1-1, as contemplated in Ex. A1-3-3 p.2. The resulting average residential monthly customer bill increase would be \$1.06 per year. The annual residential customer bill

1 impact is provided in Ex. N3-1-1 Attachment 1, Table 2. The calculations to derive this bill  
2 impact are provided in Ex. N3-1-1 Attachment 1, Tables 2-4.

3  
4 **L-1.3-5 CCC-010(a)**

5 The two alternatives identified in the interrogatory have been superseded. The revised  
6 alternatives are provided as Scenario 1 and Scenario 2 in the revised response to Ex. L-1.3-1  
7 Staff-005 above. A revised Chart 1 is provided as Ex. N3-1-1 Attachment 1, Table 5.

8  
9 **L-11.6-1 Staff 263:**

10 This update utilizes the same revenue requirement inputs as contemplated in the original  
11 interrogatory response and uses the same proposed annual change in the WAPA over the  
12 deferral period.

13  
14 No change is required to Chart 1, however Chart 2 has been updated for OPG's revised rate  
15 smoothing proposal that increases WAPA by 2.5% per year. For convenience, the originally  
16 filed Chart 1 has been provided in Ex. N3-1-1 Attachment 1 Table 6, and an updated Chart 2  
17 is provided as Ex. N3-1-1 Attachment 1, Table 7.

18  
19 **L-11.6-1 Staff 265 (b)**

20 The charts provided on pages 1 and 2 of OPG's original interrogatory response have been  
21 updated to reflect the revised smoothing proposal in Ex. N3-1-1 and are included as Ex. N3-  
22 1-1 Attachment 1, Tables 8 and 9. The values shown reflect the updates to the 2017-2021  
23 revenue requirements per Ex. N1-1-1 and Ex. N2-1-1.

24  
25 **L-11.6-2 AMPCO 158 and L-11.6-8 GEC 62 Attachment 1**

26 These responses are based on customer bill smoothing. The amended Regulation requires  
27 nuclear rate smoothing based on WAPA. These responses cannot be meaningfully updated  
28 under the amended Regulation.

1 **L-1.3-8 GEC-064:**

2 Ex. L-1.3-8 GEC-064, Attachment 1 from OPG's response to this interrogatory filed on  
3 February 22, 2017 has been updated to reflect the revised rate smoothing proposal in Ex.  
4 N3-1-1, using the same revenue requirement inputs contemplated in the originally filed  
5 response. The updated information is provided as Ex. N3-1-1 Attachment 1, Table 10.

6  
7 **L-1.3-8 GEC-065:**

8 Tables 1-3 from Attachment 1 from OPG's original response to this interrogatory have been  
9 updated to reflect the revised rate smoothing proposal per Ex. N3-1-1, using the same  
10 revenue requirement inputs contemplated in the originally filed response. The revised rate  
11 smoothing proposal affects Scenarios 1, 3 and 5 outlined in the interrogatory response. The  
12 updated tables are provided as Ex. N3-1-1 Attachment 1, Tables 11-13.

13  
14 **L-11.6-7 ED-024:**

15 An updated Chart 1 which provides the smoothed nuclear base rates from 2016 to 2036  
16 consistent with OPG's revised rate smoothing proposal per Ex. N3-1-1 and updated 2017-  
17 2021 revenue requirement information in Ex. N1-1-1 and Ex. N2-1-1 is provided as Ex. N3-1-  
18 1 Attachment 1, Table 14.

19  
20 **L-9.7-15 SEC-093:**

21 An update to the chart provided on page 1 of the interrogatory response consistent with  
22 OPG's revised rate smoothing proposal and updated 2017-2021 revenue requirement  
23 information in Ex. N1-1-1 and Ex. N2-1-1 is provided as Ex. N3-1-1 Attachment 1, Table 15.

24  
25 **L-1.3-15 SEC-006:**

26 An updated SEC-6 Attachment 1 is provided as Ex. N3-1-1 Attachment 1, Table 16, including  
27 the smoothed nuclear payment amounts and nuclear payment riders per Ex. N3-1-1 Table 3  
28 lines 10 and 11, respectively.

**L-11.6-20 VECC-051(a):**

An amended Chart 4 to reflect OPG's current rate smoothing proposal is provided as Ex. N3-1-1 Attachment 1, Table 17, including the impact of revenue requirement updates in Ex. N1-1-1 and Ex. N2-1-1.

**L-11.6-2 AMPCO-158:**

An amended Attachment 1 reflecting OPG's current rate smoothing proposal is provided as Ex. N3-1-1 Attachment 1, Table 18.

**3.0 UNDERTAKINGS**

**JT2.24:**

The undertaking explored an option to address the 2017 reduction in the overall weighted average payment amounts by keeping payments flat in 2017. The amended Regulation is similarly focussed on the weighted average payment amount with the stated objective of making the year over year weighted average payment amounts more stable. OPG's proposal addresses the intent of the undertaking.

**JT3.11:**

Ex. N3-1-1 Attachment 1, Table 19 updates Ex. JT 3.11 Attachment 1 by providing the annual net revenue deferred/recovered, interest during the period and period-end Rate Smoothing Deferral Account balance, based on nuclear payment amount smoothing using WAPA and indicative annual revenue requirements and production values. For the 2017 to 2021 period, these revenue requirements reflect updates in Ex. N1-1-1 and Ex. N2-1-1.



Numbers may not add due to rounding.

Filed: 2017-03-08  
EB-2016-0152  
Exhibit N3  
Tab 1  
Schedule 1  
Attachment 2  
Table 1

Table 1  
Updated L-1.3-1 Staff-005 Chart 1  
Derivation of \$0.65 Average Customer Bill Impact

	2017	2018	2019	2020	2021	Average
Typical Bill Impact (\$/Month)	0.62	0.64	0.66	0.66	0.66	0.65

Table 2  
Updated L-1.3-1 Staff-005 Table 1  
Annualized Residential Consumer Impact of Illustrative Rates  
EB-2013-0321 / EB-2014-0370 to EB-2016-0152

Line No.	Description	2017 Amount	2018 Amount	2019 Amount	2020 Amount	2021 Amount	Average
		(a)	(b)	(c)	(d)	(e)	(e)
1	Typical Consumption <sup>1</sup> (kWh/Month)	789	789	789	789	789	789
2	Typical Usage of OPG Generation (kWh/Month) (line 1 x line 11)	408	410	413	403	392	405
3	Typical Bill <sup>1</sup> (\$/Month)	150.58	150.58	150.58	150.58	150.58	150.58
4	Typical Bill Impact (\$/Month) (line 2 x line 8 / 1000)	0.99	1.03	1.08	1.10	1.11	1.06
5	Typical Bill Impact (%) (line 4 / line 3)	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%
6	Prior Year weighted average rate with proposed payment amounts and riders <sup>2,3</sup> (\$/MWh)	60.97	63.40	65.92	68.54	71.26	66.02
7	Current Year weighted average rate with proposed payment amounts and riders <sup>2,3</sup> (\$/MWh)	63.40	65.92	68.54	71.26	74.10	68.64
8	Change in OPG weighted average rate (\$/MWh) (line 7 - line 6)	2.42	2.52	2.62	2.73	2.83	2.62
9	Total OPG Regulated Production <sup>4</sup> (TWh)	71.1	71.4	72.0	70.3	68.4	70.6
10	Forecast of 2017 Provincial Demand <sup>5</sup> (TWh)	137.6	137.6	137.6	137.6	137.6	137.6
11	OPG Proportion of Consumer Usage (line 9 / line 10)	51.7%	51.9%	52.3%	51.1%	49.7%	51.3%

Notes:

1

Typical monthly consumption (750 kWh) and typical monthly bill are based on the OEB "Bill Calculator" for estimating monthly electricity bills (using Time of Use pricing), available at:  
<http://www.ontarioenergyboard.ca/OEB/Consumers/Electricity/Your+Electricity+Utility>  
Typical Consumption includes line losses (Assumed loss factor of 1.0525)

2

From Ex. N3-1-1 Attch 1 Table 3

3

Uses Nuclear smoothed rate per Ex. N3-1-1 Table 3, IRM Hydro rate (illustrative after 2017) per Ex. I1-2-1 Table 1

4

From Ex. N3-1-1 Attch 1 Table 3, line 5.

5

Based on forecast demand for 2017 (137.6 TWh) from Table 3.1 of IESO 18-Month Outlook Update for April 2016 to September 2017, published March 22, 2016.

Numbers may not add due to rounding.

Filed: 2017-03-08  
EB-2016-0152  
Exhibit N3  
Tab 1  
Schedule 1  
Attachment 2  
Table 3

Table 3  
Updated L-1.3-1 Staff-005 Table 2  
Computation of Percent Change in Illustrative Payment Amounts  
EB-2013-0321 / EB-2014-0370 to EB-2016-0152

Line No.	Description	Note	2016 per EB-2013-0321 Payment Amounts Order plus EB-2014-0370 Riders	2017 per EB-2016-0152 Proposed Payment Amount plus EB-2016-0152 Riders	2018 per EB-2016-0152 Proposed Payment Amount plus EB-2016-0152 Riders	2019 per EB-2016-0152 Proposed Payment Amount	2020 per EB-2016-0152 Proposed Payment Amount	2021 per EB-2016-0152 Proposed Payment Amount
			(a)	(b)	(c)	(d)	(e)	(f)
1	Regulated Hydroelectric Rate Including Rider (\$/MWh)	1	44.55	43.15	43.77	42.97	43.61	44.27
2	Nuclear Rate Including Rider (\$/MWh)	2	72.30	80.92	84.90	90.14	95.67	101.90
3	Regulated Hydroelectric Production (TWh)	3	33.0	33.0	33.0	33.0	33.0	33.0
4	Forecast Nuclear Production (TWh)	3	47.8	38.1	38.5	39.0	37.4	35.4
5	Total Production (TWh) (line 3 + line 4)		80.8	71.1	71.4	72.0	70.3	68.4
7	Regulated Hydroelectric Portion of Production-Weighted Average Rate (\$/MWh) (line 1 x line 3 / line 5)		18.19	20.02	20.20	19.68	20.45	21.35
6	Nuclear Portion of Production-Weighted Average Rate (\$/MWh) (line 2 x line 4 / line 5)		42.78	43.38	45.71	48.86	50.81	52.74
8	Total Production-Weighted Average Rate (\$/MWh) (line 6 + line 7 )		60.97	63.40	65.92	68.54	71.26	74.10
9	Percentage Change in Hydroelectric Rate Including Rider	4		-3.2%	1.4%	-1.8%	1.5%	1.5%
10	Percentage Change in Nuclear Rate Including Rider	4		11.9%	4.9%	6.2%	6.1%	6.5%
11	Percentage Change in Overall Payment Amount			4.0%	4.0%	4.0%	4.0%	4.0%

Notes:

1 Col. (a) is average Regulated Hydroelectric payment amount including riders for Jul-Dec 2015 (production-weighted average of previously and newly regulated hydroelectric base rates and riders in effect at the end of 2015). See Ex. I1-2-1 Table 1(a). Col. (b) - (f) is proposed EB-2016-0152 payment amount plus riders from Ex. I1-2-1 Table 1 line 10.

2 Col. (a) is base rate of \$59.29/MWh (EB-2013-0321 Payment Amounts Order, Appendix D, Table 1, line 3) plus nuclear rider 2016 from EB-2014-0370 (\$10.84/MWh) plus Nuclear Interim Period Shortfall Rider from EB-2014-0370 (\$2.17/MWh). Col. (b) - (f) is calculated as the nuclear payment amount required to each a 2.5% increase in line 11 - percentage change in overall payment amount

3 Regulated Hydroelectric production is the 2014 and 2015 average OEB approved hydroelectric production per EB-2013-0321 Decision and Order page 9  
Nuclear 2016 production is the 2014 and 2015 average OEB approved per EB-2013-0321 Decision and Order pages 39-40. 2017-2021 from EB-2016-0152 Ex. E2-1-2\_Table 1

4 Rider included per Ex. H1-2-1 Tables 1 and 2 only - no assumptions made for future riders in the 2019-2021 period

Numbers may not add due to rounding.

Filed: 2017-03-08  
EB-2016-0152  
Exhibit N3  
Tab 1  
Schedule 1  
Attachment 2  
Table 4

Table 4  
Updated L-1.3-1 Staff-005 Table 3  
Annualized Residential Customer Impact of Illustrative Rates  
EB-2013-0321 / EB-2014-0370 to EB-2016-0152

Line No.	Description	2017	2018	2019	2020	2021
		(a)	(b)	(c)	(d)	(e)
	<b><u>PAYMENT AMOUNT:</u></b>					
1	<b>Revenue Requirement Before Stretch Factor <sup>1</sup> (\$M)</b>	3,161.4	3,190.7	3,283.4	3,798.8	3,418.4
2	<b>Nuclear Base OM&amp;A<sup>2</sup></b>	1,218.9	1,232.0	1,271.8	1,284.8	1,297.4
3	<b>Nuclear Allocated Corporate Costs<sup>3</sup></b>	448.9	437.2	442.7	445.0	454.1
4	<b>Total OM&amp;A Applicable for Stretch Factor<sup>4</sup></b>	1,667.8	1,669.2	1,714.6	1,729.8	1,751.5
5	<b>Nuclear Stretch Factor (Ex. A1-3-2, Chart 9)</b>		0.3%	0.3%	0.3%	0.3%
6	<b>Cummulative Nuclear Stretch Dollars ((line 4 x line 5) + Prior Year)</b>	-	5.0	10.2	15.3	20.6
7	<b>Revenue Requirement Net of Stretch Factor (\$M) (line 1 - line 6)</b>	3,161.4	3,185.7	3,273.2	3,783.5	3,397.8
8	<b>Forecast Production<sup>5</sup> (TWh)</b>	38.1	38.5	39.0	37.4	35.4
9	<b>Illustrative Unsmoothed Payment Amount (\$/MWh) (line 7/line 8)</b>	83.0	82.8	83.9	101.3	96.0
10	<b>Illustrative Constant WAPA Rate Increase Without Deferral (\$/MWh)<sup>6</sup></b>	78.07	82.05	90.14	95.67	101.90
	<b><u>DEFERRAL AND VARIANCE ACCOUNT PAYMENT RIDER:</u></b>					
11	<b>Payment Rider<sup>7</sup> (\$/MWh)</b>	2.85	2.85			
12	<b>Total of Nuclear Payment Amount Plus Riders (\$/MWh) (line 11 + line 12)</b>	80.92	84.90	90.14	95.67	101.90

Notes:

1 From Ex. N3-1-1 Table 3, line 1.

2 Ex. F2-1-1 Table 1 (updated for changes to CNSC requirements and ONFA waste related OM&A, per N1-1-1)

3 Ex. F2-1-1 Table 1

4 Please see section 3.2 of Ex. A1-3-2

5 From Ex. E2-1-1 Table 1, line 3, cols. (e) through (i).

6 Rate required to arrive at a constant WAPA that results in net zero deferral over 2017-2021 (See N3-1-1 Attachment 1, Table 5 line 2)

7 From Ex. H1-2-1 Table 2, line 18, col (g)

Numbers may not add due to rounding.

Filed: 2017-03-08  
EB-2016-0152  
Exhibit N3  
Tab 1  
Schedule 1  
Attachment 2  
Table 5

Table 5  
Updated L-1.3-5 CCC-010 Chart 1  
Illustration of the Annual Deferred Revenue Requirement and the Associated Interest

Line No.	Description	2017 Amount	2018 Amount	2019 Amount	2020 Amount	2021 Amount
		(a)	(b)	(c)	(d)	(e)
1	Unsmoothed Nuclear Rate <sup>1</sup> (\$/MWh)	82.98	82.81	83.87	101.28	96.03
2	Illustrative Nuclear Smoothed Rates, Based on a Constant Rate of Change <sup>2</sup> (\$/MWh)	78.07	82.05	90.14	95.67	101.90
3	Forecast Nuclear Production <sup>3</sup> (TWh)	38.1	38.5	39.0	37.4	35.4
4	Annual Deferred Amount (\$M)	187	29	(245)	210	(208)
5	Interest Expense (\$M)	5	10	5	4	5
5	Cumulative Interest (\$M)	5	14	19	23	28

Notes:  
1 Ex. N3-1-1 Table 3 line 9  
2 Reflects WAPA increase of approximately 3.98% to provide for recovery of the deferred Revenue Requirement and interest. The Rate Smoothing Deferral Account Balance is \$0 in 2021  
3 Ex. I1-3-1 Table 1, line 8

Numbers may not add due to rounding.

Filed: 2017-03-08  
EB-2016-0152  
Exhibit N3  
Tab 1  
Schedule 1  
Attachment 2  
Table 6

Table 6  
L-11.6-1 Staff-263 Chart 1 (As Filed)

	2017-2021	2022-2026	2027-2031	2032-2036
Anticipated Revenue Requirement (\$BN)	16.0	15.1	17.4	17.1
Anticipated Production (TWh)	176	79	136	141
<b>Average Rate (\$/MWh)</b>	<b>91</b>	<b>190</b>	<b>128</b>	<b>121</b>

Numbers may not add due to rounding.

Filed: 2017-03-08  
EB-2016-0152  
Exhibit N3  
Tab 1  
Schedule 1  
Attachment 2  
Table 7

Table 7  
Updated L-11.6-1 Staff-263 Chart 2

	No Extension	Proposal	Variance (a)-(b)
<b>2017-2021 Average Change in WAPA</b>	<b>2.5%</b>	<b>2.5%</b>	<b>0.0%</b>
<b>2022-2026 Average Change in WAPA</b>	<b>7.0%</b>	<b>7.0%</b>	<b>0.0%</b>
<b>2027-2036 Average Change in WAPA</b>	<b>0.2%</b>	<b>(1.0)%</b>	<b>1.2%</b>
<b>Peak Account Balance (\$B)</b>	<b>\$5.0</b>	<b>\$2.9</b>	<b>\$2.1</b>
<b>Total Interest (\$BN)</b>	<b>\$2.6</b>	<b>\$1.4</b>	<b>\$1.2</b>
<b>Interest Cost / Deferred Revenue Ratio</b>	<b>0.6</b>	<b>0.5</b>	<b>0.2</b>
<b>FFO Interest Coverage &gt; = 3 (2017-2021) &amp; (2022-2026)</b>	<b>4.7 / 5.5</b>	<b>4.6 / 5.4</b>	<b>N/A</b>
<b>DEBT to EBITDA &lt; = 5.5 (2017-2021) &amp; (2022-2026)</b>	<b>5.8 / 5.1</b>	<b>5.9 / 5.2</b>	<b>N/A</b>
<b>Nuclear Payment Amount Transition Impact (\$/MWh)</b>	<b>(\$24.1)</b>	<b>(\$3.7)</b>	<b>(\$20.3)</b>
<b>Average Annual Bill Impact (2017-2021) in %</b>	<b>0.4%</b>	<b>0.4%</b>	<b>0.0%</b>
<b>Average Annual Bill Impact (2017-2021) in \$</b>	<b>\$0.60</b>	<b>\$0.65</b>	<b>(\$0.05)</b>
<b>Average Annual Bill Impact (2017-2036) in %<sup>1</sup></b>	<b>0.4%</b>	<b>0.3%</b>	<b>0.1%</b>
<b>Average Annual Bill Impact (2017-2036) in \$<sup>1</sup></b>	<b>\$ 0.55</b>	<b>\$0.47</b>	<b>\$0.08</b>

Notes

<sup>1</sup> Calculated assuming that hydroelectric payment amounts continue to escalate through the 2017-2036 period pursuant to the price-cap as proposed in Ex. I1-2-1 Table 1

Numbers may not add due to rounding

Filed: 2017-03-08  
EB-2016-0152  
Exhibit N3  
Tab 1  
Schedule 1  
Attachment 2  
Table 8

Table 8  
Updated L-11.6-1 Staff-265 Page 1 Chart

	2017-2021	2022-2026	2027-2031	2032-2036
Anticipated Smoothed Revenue Requirement (\$BN)	15.8	17.3	20.0	18.5
Anticipated Nuclear Production (TWh)	188	130	136	141
Average Rate (\$/MWh)	84	133	148	131



Numbers may not add due to rounding

Filed: 2017-03-08  
EB-2016-0152  
Exhibit N3  
Tab 1  
Schedule 1  
Attachment 2  
Table 9

Table 9  
Updated L-11.6-1 Staff-265 Page 2 Chart

	2017-2021	2022-2026	2027-2031	2032-2036
<b>Net Amount Deferred and (Recovered) [including interest Recovery] (\$M)</b>	1,005	774	(1,763)	(1,407)
<b>Total Interest Added to the Balance (\$M)</b>	116	539	611	128
<b>Account Balance at End of Period (\$M)</b>	1,121	2,434	1,281	0

Numbers may not add due to rounding

Filed: 2017-03-08  
 EB-2016-0152  
 Exhibit N3  
 Tab 1  
 Schedule 1  
 Attachment 2  
 Table 10

Table 10  
 Updated L-1.3-8 GEC-064 Attachment 1  
Customer Bill Impacts: DRP as Proposed vs. DRP Discontinued

		Combined Customer Bill Impacts						Customer Bill Impacts <sup>4</sup>	Customer Bill Impacts <sup>5</sup>
Description	Notes	2017	2018	2019	2020	2021	2017-2021	2017-2036	2017-2036
<b>DRP as Proposed:</b>									
Unsmoothed Bill Impact (\$)	1	\$ (1.24)	\$ 2.32	\$ 1.79	\$ 2.69	\$ 2.81	\$ 1.67	\$ 0.23	\$ 0.41
Unsmoothed Bill Impact (%)	1	-0.8%	1.5%	1.2%	1.8%	1.9%	1.1%	0.2%	0.3%
Smoothed Bill Impact (\$)	2	\$ 0.62	\$ 0.64	\$ 0.66	\$ 0.66	\$ 0.66	\$ 0.65	\$ 0.36	\$ 0.47
Smoothed Bill Impact (%)	2	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.2%	0.3%
<b>DRP Discontinued</b>									
Unsmoothed Bill Impact (\$)	3	\$ (0.79)	\$ 2.93	\$ 2.60	\$ 4.26	\$ 4.79	\$ 2.76	\$ 0.84	\$ 0.50
Unsmoothed Bill Impact (%)	3	-0.5%	1.9%	1.7%	2.8%	3.2%	1.8%	0.6%	0.3%
Smoothed Bill Impact (\$)		\$ 0.62	\$ 0.64	\$ 0.66	\$ 0.69	\$ 0.70	\$ 0.66	\$ 0.91	\$ 0.59
Smoothed Bill Impact (%)		-0.5%	1.9%	1.7%	2.8%	3.2%	1.8%	0.6%	0.4%

Notes

1: Annual unsmoothed bill impacts from annual average nuclear payment amount increases of 14.5% per year over the 2017 to 2021 period to recover the updated N2 nuclear revenue requirement over the proposed production levels for the 2017 to 2021 period. Approach is consistent with approach used in in Ex. A1-3-3, Page 2, lines 10 to 13 and is not impacted by changes to the revised rate smoothing regulation.

2: Annual smoothed bill impacts supporting the N3-1-1 Update (Table 1).

3: Annual unsmoothed bill impacts from annual average nuclear payment amount increases of 18% per year over the 2017 to 2021 period to recover the revised nuclear revenue requirement over the revised production levels for the 2017 to 2021 period. Approach is consistent with approach used in footnote 1 above.

4: Reflects the nuclear year-over-year average of the annual customer bill impacts.

5: Reflects the combined year-over-year average of the annual customer bill impacts.

Numbers may not add due to rounding.

Filed: 2017-03-08  
EB-2016-0152  
Exhibit N3  
Tab 1  
Schedule 1  
Attachment 2  
Table 11

Table 11  
Updated L-1.3-8 GEC-065 Attachment 1, Table 1  
Nuclear Payment Amounts (\$/MWh)

Line No		2017	2018	2019	2020	2021	Average 2022-2026	Average 2027-2031	Average 2032-2036
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
1	25% Cost Over Run (Smoothed)	76.40	78.60	84.83	88.21	92.02	133.11	157.44	156.80
2	100% Cost Over Run (Smoothed)	76.40	78.60	84.83	88.21	92.02	133.11	182.75	229.98
3	25% Cost Over Run + Delay (Smoothed) <sup>1</sup>	76.40	78.60	84.66	89.20	89.82	142.31	157.90	161.15
4	25% Cost Over Run (Unsmoothed)	84.00	84.36	83.68	103.14	100.90	145.92	144.75	130.19
5	100% Cost Over Run (Unsmoothed)	84.82	83.92	82.16	109.38	107.72	166.47	175.44	156.52
6	25% Cost Over Run + Delay (Unsmoothed) <sup>1</sup>	84.00	84.36	82.94	89.51	93.14	164.87	139.88	135.14

Notes:

- Scenario includes a one year delay in Unit 2 and extends deferral period and recovery period out by one year. Column (f) covers 2022-2027, column (g) covers 2028-2032, column (h) covers 2033-2037

Numbers may not add due to rounding.

Filed: 2017-03-08  
EB-2016-0152  
Exhibit N3  
Tab 1  
Schedule 1  
Attachment 2  
Table 12

Table 12  
Updated L-1.3-8 GEC-065 Attachment 1, Table 2  
Annualized Residential Consumer Impact

Line No		2017	2018	2019	2020	2021	Average 2017-2021
		(a)	(b)	(c)	(d)	(e)	(f)
	<b>SMOOTHED</b>						
	<b>25% cost over run</b>						
1	Typical Bill Impact (\$/Month)	0.62	0.64	0.66	0.66	0.66	0.65
2	Typical Bill Impact (%)	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
	<b>100% cost over run</b>						
3	Typical Bill Impact (\$/Month)	0.62	0.64	0.66	0.66	0.66	0.65
4	Typical Bill Impact (%)	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
	<b>25% cost over run + delay</b>						
5	Typical Bill Impact (\$/Month)	0.62	0.64	0.66	0.65	0.70	0.65
6	Typical Bill Impact (%)	0.4%	0.4%	0.4%	0.4%	0.5%	0.4%
	<b>UNSMOOTHED</b>						
	<b>25% cost over run</b>						
7	Typical Bill Impact (\$/Month)	(1.17)	2.40	1.90	2.81	2.96	1.78
8	Typical Bill Impact (%)	-0.8%	1.6%	1.3%	1.9%	2.0%	1.2%
	<b>100% cost over run</b>						
9	Typical Bill Impact (\$/Month)	(1.04)	2.58	2.13	3.08	3.27	2.00
10	Typical Bill Impact (%)	-0.7%	1.7%	1.4%	2.0%	2.2%	1.3%
	<b>25% cost over run + delay</b>						
11	Typical Bill Impact (\$/Month)	(1.43)	2.07	1.51	1.99	3.45	1.52
12	Typical Bill Impact (%)	-1.0%	1.4%	1.0%	1.3%	2.3%	1.0%

Table 13  
 Updated L-1.3-8 GEC-065 Attachment 1, Table 3  
Average Bill Impact (2017-2036)

Line No		2017-2036
	<b><u>SMOOTHED</u></b>	
	<b>25% cost over run</b>	
1	Typical Bill Impact (\$/Month)	0.73
2	Typical Bill Impact (%)	0.5%
	<b>100% cost over run</b>	
3	Typical Bill Impact (\$/Month)	1.50
4	Typical Bill Impact (%)	1.0%
	<b>25% cost over run + delay<sup>1</sup></b>	
5	Typical Bill Impact (\$/Month)	0.72
6	Typical Bill Impact (%)	0.5%
	<b><u>UNSMOOTHED</u></b>	
	<b>25% cost over run</b>	
7	Typical Bill Impact (\$/Month)	0.48
8	Typical Bill Impact (%)	0.3%
	<b>100% cost over run</b>	
9	Typical Bill Impact (\$/Month)	0.67
10	Typical Bill Impact (%)	0.4%
	<b>25% cost over run + delay<sup>1</sup></b>	
11	Typical Bill Impact (\$/Month)	0.49
12	Typical Bill Impact (%)	49.3%

Notes

- 1 One year delay in Unit 2 extends deferral period and recovery period out by one year. The final Column covers 2017-2037 for this scenario.

Filed: 2017-03-08

EB-2016-0152

Exhibit N3

Tab 1

Schedule 1

Attachment 2

Table 14

Table 14

Updated L-11.6-7 ED-024 Chart 1  
Smoothed Nuclear Base Rates 2016-  
2036

Year	Nuclear Base Rates (\$/MWh)
2016	59.29
2017	76.39
2018	78.60
2019	84.83
2020	88.21
2021	92.02
2022	104.20
2023	126.39
2024	124.75
2025	165.43
2026	161.28
2027	160.77
2028	149.88
2029	145.34
2030	142.29
2031	141.18
2032	136.50
2033	133.82
2034	132.74
2035	128.19
2036	125.44

Numbers may not add due to rounding

Filed: 2017-03-08  
 EB-2016-0152  
 Exhibit N3  
 Tab 1  
 Schedule 1  
 Attachment 2  
 Table 15

Table 15  
 Updated L-9.7-15 SEC-093 Page 1 Chart  
Five-Year Revenue Requirement, Production, Average Rate, and Rate Smoothing Deferral Account Activity

Line No.		2017-2021	2022-2026	2027-2031	2032-2036
		(a)	(b)	(c)	(d)
1	Anticipated Revenue Requirement (\$BN)	\$ 16.8	\$ 18.1	\$ 18.2	\$ 17.1
2	Anticipated Production (TWh)	188	130	136	141
3	Average Rate (\$/MWh)	\$ 89	\$ 139	\$ 135	\$ 121
4	Average smoothed rate (\$/MWh)	\$ 84	\$ 133	\$ 148	\$ 131
5	Net Revenue Requirement Deferred/Recovered (\$BN)	\$ 1.0	\$ 0.8	\$ (1.8)	\$ (1.4)
6	Interest During Period (\$BN)	\$ 0.1	\$ 0.5	\$ 0.6	\$ 0.1
7	Rate Smoothing Deferral Account Balance at End of Period (\$BN)	\$ 1.1	\$ 2.4	\$ 1.3	\$ 0.0

Numbers may not add due to rounding

Filed: 2017-03-08  
EB-2016-0152  
Exhibit N3  
Tab 1  
Schedule 1  
Attachment 2  
Table 16

Table 16  
Updated L-1.3-15 SEC-006 Table 1  
OPG Nuclear Payment Amounts

Nuclear Payment Amount															
	O.Reg 53/05	EB-2007-0905	EB-2010-0008	EB-2012-0002		EB-2013-0321		EB-2014-0370			EB-2016-0152 (Proposed)				
Effective Date	1-Apr-05	1-Apr-08	1-Mar-11	1-Jan-13	1-Jan-14	1-Nov-14	1-Jan-15	1-Jul-15	1-Oct-15	1-Jan-16	1-Jan-17	1-Jan-18	1-Jan-19	1-Jan-20	1-Jan-21
Base Payment Amount (\$/MWh)	\$ 49.50	\$ 52.98	\$ 51.52	\$ 51.52	\$ 51.52	\$ 59.29	\$ 59.29	\$ 59.29	\$ 59.29	\$ 59.29	\$ 76.39	\$ 78.60	\$ 84.83	\$ 88.21	\$ 92.02
D&V Rider (\$/MWh)	\$ -	\$ 2.00	\$ 4.33	\$ 6.27	\$ 4.18	\$ 4.18	\$ 1.33	\$ 12.17	\$ 14.34	\$ 13.01	\$ 2.85	\$ 2.85			



Numbers may not add due to rounding

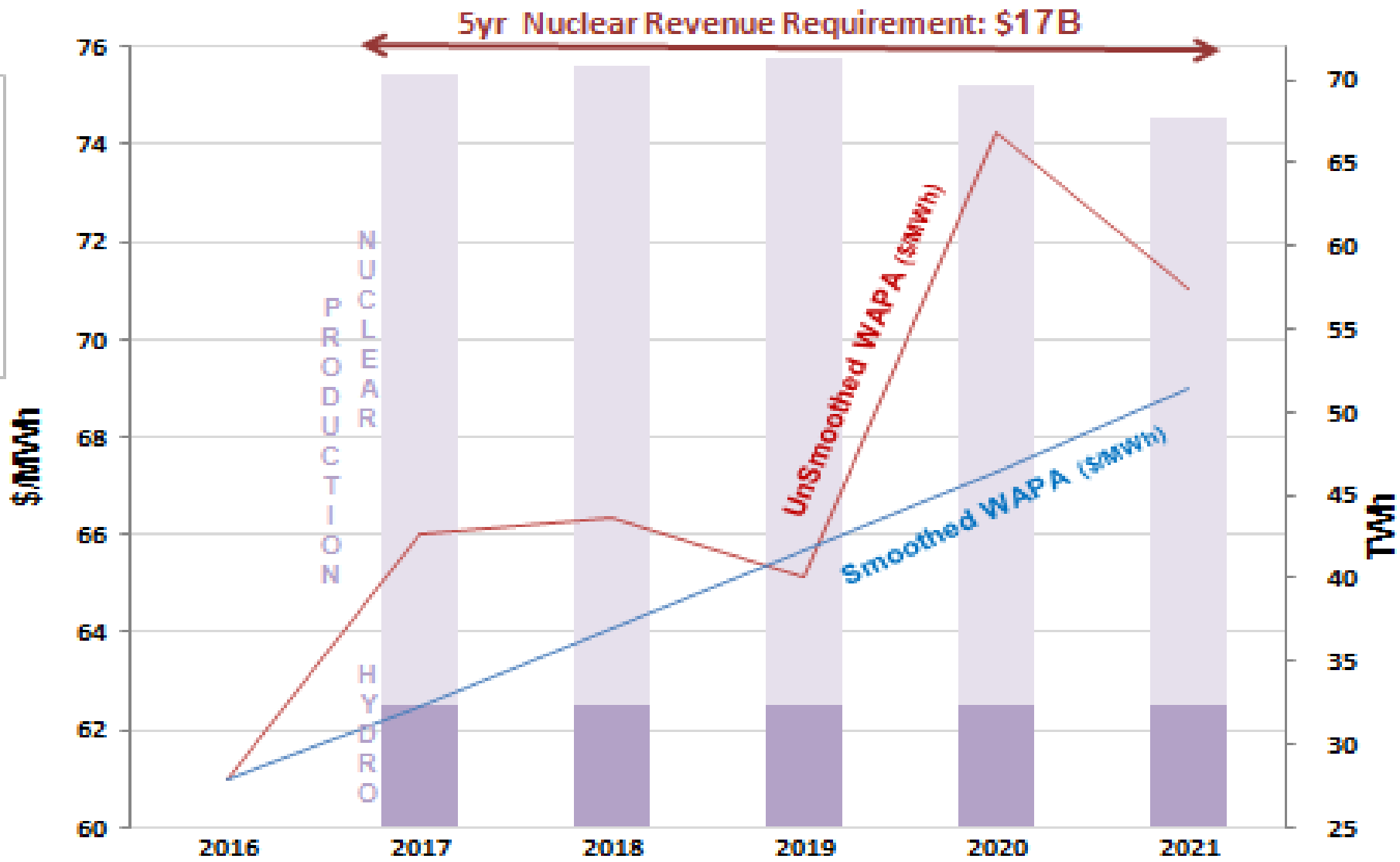
Filed: 2017-03-08  
EB-2016-0152  
Exhibit N3  
Tab 1  
Schedule 1  
Attachment 2  
Table 17

Table 17  
Updated L-11.6-20 VECC-051 Chart 4  
OPG Proposed Deferred Nuclear Revenue Requirement

	2017	2018	2019	2020	2021
<b>Proposed Revenue Requirement* (\$M)</b>	\$ 3,161	\$ 3,186	\$ 3,273	\$ 3,783	\$ 3,398
<b>Forecast Production (TWh)</b>	38.10	38.47	39.03	37.36	35.38
<b>Unsmoothed Rate (\$/MWh)</b>	\$ 82.98	\$ 82.81	\$ 83.87	\$ 101.28	\$ 96.03
<b>Smoothed Rate (\$/MWh)</b>	\$ 76.39	\$ 78.60	\$ 84.83	\$ 88.21	\$ 92.02
<b>Smoothed Revenue (\$M)</b>	\$ 2,910	\$ 3,024	\$ 3,311	\$ 3,295	\$ 3,256
<b>Deferred Revenue Requirement (\$M)</b>	\$ 251	\$ 162	\$ (38)	\$ 488	\$ 142

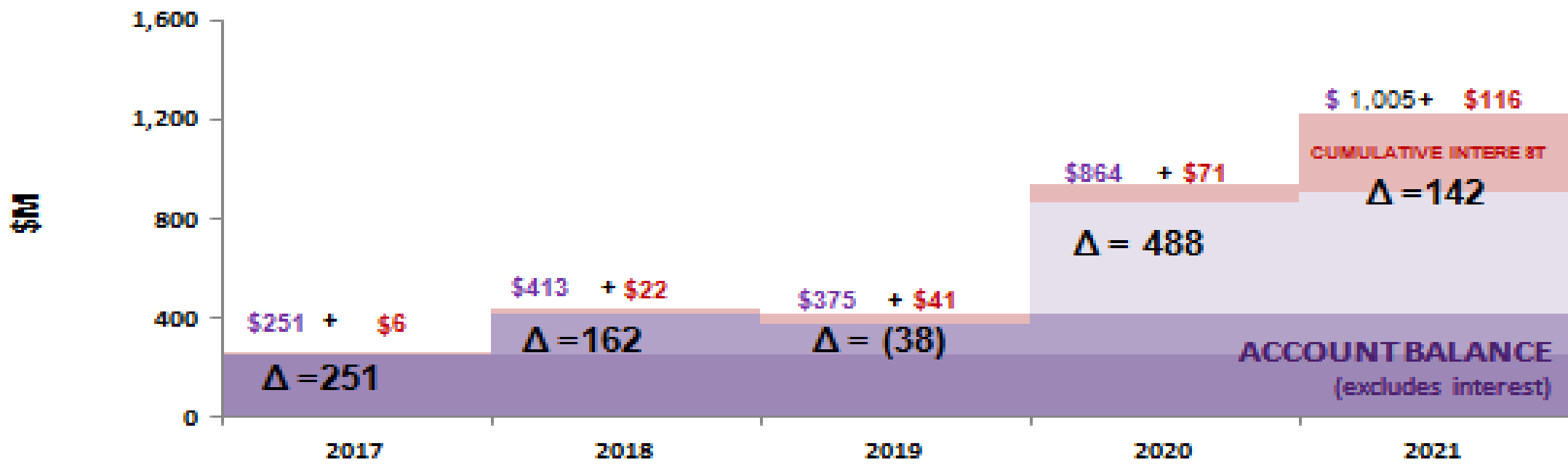
\* Revenue requirement for 2017-2021 based on I tables in N2 update as of Feb 2017

WAPA  
Smoothing  
Analysis  
2017-2021



1) Proposed Nuclear Production (TWh)		38.1	38.5	39.0	37.4	35.4
2) OEB Approved Hydroelectric Production (TWh)		32.3	32.3	32.3	32.3	32.3
3) Unsmoothed WAPA (\$/MWh)	60.97	66.03	66.33	65.14	74.24	71.06
4) Smoothed WAPA (\$/MWh)	60.97	62.50	64.06	65.66	67.30	68.98

Rate Smoothing Proposal 2017-2021 Account



1) Proposed Nuclear Production (TWh)	38.1	38.5	39.0	37.4	35.4
3) Unconstrained Nuclear Rate (\$/MWh)	82.98	82.81	83.87	101.28	96.03
4) Nuclear Rate (Under WAPA) (\$/MWh)	76.39	78.60	84.83	88.21	92.02
4) Deferred Amount (\$M)	251	162	( 38)	488	142
5) Est. Interest Expense (\$M)	6	16	19	30	45
6) Accumulated Interest (\$M)	6	22	41	71	116

Numbers may not add due to rounding.

Filed: 2017-03-08  
EB-2016-0152  
Exhibit N3  
Tab 1  
Schedule 1  
Attachment 2  
Table 19

Table 19  
Updated JT3.11 Table 1  
Five-Year Revenue Requirement, Production, Average Rate, and Rate Smoothing Deferral Account Activity

Line No.		2017	2018	2019	2020	2021	2017-2021
		(a)	(b)	(c)	(d)	(e)	(f)
1	Anticipated Revenue Requirement (\$BN)	\$ 3.2	\$ 3.2	\$ 3.3	\$ 3.8	\$ 3.4	\$ 16.8
2	Anticipated Production (TWh)	38	38	39	37	35	\$ 188
3	Average Rate (\$/MWh)	\$ 83	\$ 83	\$ 84	\$ 101	\$ 96	\$ 89
4	Smoothed rate (\$/MWh)	\$ 76	\$ 79	\$ 85	\$ 88	\$ 92	\$ 84
5	Net Revenue Requirement Deferred/Recovered (\$BN)	\$ 0.3	\$ 0.2	\$ (0.0)	\$ 0.5	\$ 0.1	\$ 1.0
6	Interest During Period (\$BN)	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.1
7	Rate Smoothing Deferral Account Balance at End of Period (\$BN)	\$ 0.3	\$ 0.4	\$ 0.4	\$ 0.9	\$ 1.1	N/A

Line No.		2022	2023	2024	2025	2026	2022-2026
		(a)	(b)	(c)	(d)	(e)	(f)
8	Anticipated Revenue Requirement (\$BN)	\$ 3.6	\$ 3.4	\$ 3.6	\$ 3.9	\$ 3.5	\$ 18.1
9	Anticipated Production (TWh)	31	23	31	19	25	\$ 130
10	Average Rate (\$/MWh)	\$ 116	\$ 147	\$ 117	\$ 205	\$ 139	\$ 139
11	Smoothed rate (\$/MWh)	\$ 104	\$ 126	\$ 125	\$ 165	\$ 161	\$ 136
12	Net Revenue Requirement Deferred/Recovered (\$BN)	\$ 0.4	\$ 0.5	\$ (0.3)	\$ 0.8	\$ (0.6)	\$ 0.8
13	Interest During Period (\$BN)	\$ 0.1	\$ 0.1	\$ 0.1	\$ 0.1	\$ 0.1	\$ 0.5
14	Rate Smoothing Deferral Account Balance at End of Period (\$BN)	\$ 1.6	\$ 2.1	\$ 2.0	\$ 2.9	\$ 2.4	N/A

Line No.		2027	2028	2029	2030	2031	2027-2031
		(a)	(b)	(c)	(d)	(e)	(f)
15	Anticipated Revenue Requirement (\$BN)	\$ 4.2	\$ 3.9	\$ 3.3	\$ 3.4	\$ 3.5	\$ 18.2
16	Anticipated Production (TWh)	24	27	28	28	27	\$ 136
17	Average Rate (\$/MWh)	\$ 174	\$ 142	\$ 118	\$ 118	\$ 126	\$ 135
18	Smoothed rate (\$/MWh)	\$ 161	\$ 150	\$ 145	\$ 142	\$ 141	\$ 148
19	Net Revenue Requirement Deferred/Recovered (\$BN)	\$ 0.3	\$ (0.2)	\$ (0.8)	\$ (0.7)	\$ (0.4)	\$ (1.8)
20	Interest During Period (\$BN)	\$ 0.1	\$ 0.2	\$ 0.1	\$ 0.1	\$ 0.1	\$ 0.6
21	Rate Smoothing Deferral Account Balance at End of Period (\$BN)	\$ 2.9	\$ 2.8	\$ 2.2	\$ 1.6	\$ 1.3	N/A

Line No.		2032	2033	2034	2035	2036	2032-2036
		(a)	(b)	(c)	(d)	(e)	(f)
22	Anticipated Revenue Requirement (\$BN)	\$ 3.4	\$ 3.4	\$ 3.5	\$ 3.4	\$ 3.5	\$ 17.1
23	Anticipated Production (TWh)	29	28	27	28	28	\$ 141
24	Average Rate (\$/MWh)	\$ 118	\$ 119	\$ 129	\$ 118	\$ 122	\$ 121
25	Smoothed rate (\$/MWh)	\$ 137	\$ 134	\$ 133	\$ 128	\$ 125	\$ 131
26	Net Revenue Requirement Deferred/Recovered (\$BN)	\$ (0.5)	\$ (0.4)	\$ (0.1)	\$ (0.3)	\$ (0.1)	\$ (1.4)
27	Interest During Period (\$BN)	\$ 0.1	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.0	\$ 0.1
28	Rate Smoothing Deferral Account Balance at End of Period (\$BN)	\$ 0.8	\$ 0.4	\$ 0.4	\$ 0.1	\$ 0.0	N/A

Filed March 8 2017

**EB-2016-0152**  
**Revenue Requirement Work Form**

Ontario Power Generation

## Ontario Power Generation

### EB-2016-0152 Revenue Requirement Work Form

#### *Table of Contents*

##### *Worksheet*

##### *No.*

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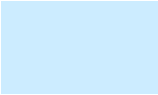
**Ontario Power Generation**

**EB-2016-0152 Revenue Requirement Work Form**

***Legend / Colour Scheme***



OPG Proposed Amounts



Adjustment Input Cells For OEB Use



Automatically Generated Calculations

OEB Adjustment Input Sheet

		Total Generating Facilities																			
Line No.	Description	2017					2018					2019					2020				
		OPG Proposed	N1 Update	N2 Update	OEB	OEB	OPG Proposed	N1 Update	N2 Update	OEB	OEB	OPG Proposed	N1 Update	N2 Update	OEB	OEB	OPG Proposed	N1 Update	N2 Update	OEB	OEB
		5/27/2016	12/19/2016	2/17/2017	Adjustment	Approved	5/27/2016	12/19/2016	2/17/2017	Adjustment	Approved	5/27/2016	12/19/2016	2/17/2017	Adjustment	Approved	5/27/2016	12/19/2016	2/17/2017	Adjustment	Approved
		(a)	(b)	(b)	(c)	(d)	(e)	(f)	(f)	(g)	(h)	(i)	(j)	(j)	(k)	(l)	(m)	(n)	(n)	(o)	(p)
Capital Structure																					
1	Common Equity	49.0%	49.0%	49.0%		49.0%	49.0%	49.0%	49.0%		49.0%	49.0%	49.0%	49.0%		49.0%	49.0%	49.0%	49.0%		49.0%
2	Debt	51.0%	51.0%	51.0%	0.0%	51.0%	51.0%	51.0%	51.0%	0.0%	51.0%	51.0%	51.0%	51.0%	0.0%	51.0%	51.0%	51.0%	51.0%	0.0%	51.0%
Cost of Capital																					
3	Short-Term Debt Facility Cost (\$M)	2.6	2.6	2.6		2.6	2.6	2.6	2.6		2.6	2.6	2.6	2.6		2.6	2.6	2.6	2.6		2.6
4	Short-Term Debt Interest Cost (\$M)	0.6	0.6	0.6		0.6	1.1	1.1	1.1		1.1	1.5	1.5	1.5		1.5	1.5	1.5	1.5		1.5
5	Short-Term Debt Cost (\$M)	2.9	2.9	2.9		2.9	3.4	3.4	3.4		3.4	3.8	3.8	3.8		3.8	3.8	3.8	3.8		3.8
6	Regulated Portion of Short-Term Debt Cost Rate	92.67%	92.67%	92.67%		92.67%	92.67%	92.67%	92.67%		92.67%	92.67%	92.67%	92.67%		92.67%	92.67%	92.67%	92.67%		92.67%
7	Existing and Planned Long-Term Debt Cost Rate	4.89%	4.89%	4.89%		4.89%	4.89%	4.89%	4.89%		4.89%	4.52%	4.52%	4.52%		4.52%	4.49%	4.49%	4.49%		4.49%
8	Other Long-Term Debt Provision Cost Rate	4.89%	4.89%	4.89%		4.89%	4.89%	4.89%	4.89%		4.89%	4.52%	4.52%	4.52%		4.52%	4.49%	4.49%	4.49%		4.49%
9	Common Equity Cost Rate ROE	8.78%	8.78%	8.78%		8.78%	9.19%	8.78%	8.78%		8.78%	9.19%	8.78%	8.78%		8.78%	9.19%	8.78%	8.78%		8.78%
10	Adjustment for Lesser of UNL/ARC Cost Rate	5.11%	4.95%	4.95%		4.95%	5.11%	4.95%	4.95%		4.95%	5.11%	4.95%	4.95%		4.95%	5.11%	4.95%	4.95%		4.95%
Capitalization (\$M)																					
11	Short-Term Debt Principal	37.1	37.1	37.1		37.1	37.1	37.1	37.1		37.1	37.1	37.1	37.1		37.1	37.1	37.1	37.1		37.1
12	Existing and Planned Long-Term Debt Principal	2,878.4	2,878.4	2,878.4		2,878.4	3,168.1	3,168.1	3,168.1		3,168.1	3,489.7	3,489.7	3,489.7		3,489.7	3,527.6	3,527.6	3,527.6		3,527.6
13	Adjustment for Lesser of UNL/ARC	775.4	524.0	524.0		524.0	725.1	446.7	446.7		446.7	674.9	369.5	369.5		369.5	624.6	292.2	292.2		292.2
		Nuclear Facilities																			
Line No.	Description	2017					2018					2019					2020				
		OPG Proposed	N1 Update	N2 Update	OEB	OEB	OPG Proposed	N1 Update	N2 Update	OEB	OEB	OPG Proposed	N1 Update	N2 Update	OEB	OEB	OPG Proposed	N1 Update	N2 Update	OEB	OEB
		5/27/2016	12/19/2016	2/17/2017	Adjustment	Approved	5/27/2016	12/19/2016	2/17/2017	Adjustment	Approved	5/27/2016	12/19/2016	2/17/2017	Adjustment	Approved	5/27/2016	12/19/2016	2/17/2017	Adjustment	Approved
		(a)	(b)	(b)	(c)	(d)	(e)	(f)	(f)	(g)	(h)	(i)	(j)	(j)	(k)	(l)	(m)	(n)	(n)	(o)	(p)
Rate Base (\$M)																					
14	Gross Plant at Cost	7,627.1	7,389.1	7,145.2		7,145.2	8,122.9	7,885.0	7,519.1		7,519.1	8,416.1	8,178.2	7,812.3		7,812.3	12,887.2	12,649.3	12,283.4		12,283.4
15	Accumulated Depreciation/Amortization	4,218.8	4,232.3	4,228.9		4,228.9	4,581.6	4,622.1	4,609.9		4,609.9	4,962.9	5,030.4	5,007.5		5,007.5	5,417.3	5,511.8	5,478.3		5,478.3
16	Cash Working Capital	11.0	11.0	11.0		11.0	11.0	11.0	11.0		11.0	11.0	11.0	11.0		11.0	11.0	11.0	11.0		11.0
17	Materials and Supplies	448.7	448.7	448.7		448.7	444.5	444.5	444.5		444.5	436.3	444.5	436.3		436.3	427.0	427.0	427.0		427.0
18	Nuclear Fuel Inventory	251.9	251.9	251.9		251.9	242.2	242.2	242.2		242.2	224.2	224.2	224.2		224.2	210.7	210.7	210.7		210.7
19	Total	4,119.8	3,868.4	3,627.9	-	3,627.9	4,239.0	3,960.6	3,606.9	-	3,606.9	4,124.7	3,819.3	3,478.2	-	3,478.2	8,118.6	7,786.2	7,453.8	-	7,453.8
Expenses (\$M)																					
20	O&M&A	2,318.6	2,346.0	2,346.0		2,346.0	2,327.1	2,351.4	2,351.4		2,351.4	2,347.9	2,425.1	2,425.1		2,425.1	2,368.0	2,468.0	2,468.0		2,468.0
21	Fuel	219.9	218.2	218.2		218.2	222.0	219.9	219.9		219.9	233.1	232.1	232.1		232.1	228.2	224.4	224.4		224.4
22	Depreciation/Amortization	346.9	373.9	367.0		367.0	378.7	405.7	395.0		395.0	384.0	411.0	400.3		400.3	524.9	551.9	541.2		541.2
23	Property Taxes	14.6	14.6	14.6		14.6	14.9	14.9	14.9		14.9	15.3	15.3	15.3		15.3	15.7	17.0	17.0		17.0
24	Total	2,900.0	2,952.6	2,945.8	-	2,945.8	2,942.8	2,991.9	2,981.2	-	2,981.2	2,980.3	3,083.5	3,072.8	-	3,072.8	3,136.7	3,261.0	3,250.3	-	3,250.3
Other Revenues (\$M)																					
25	Bruce Lease Revenues Net of Direct Costs	(66.1)	(16.9)	(16.9)		(16.9)	(74.3)	(17.1)	(17.1)		(17.1)	(85.9)	(27.4)	(27.4)		(27.4)	(82.1)	(23.8)	(23.8)		(23.8)
26	Ancillary and Other Revenue	31.7	31.7	31.7		31.7	22.0	22.0	22.0		22.0	22.7	22.7	22.7		22.7	22.2	22.2	22.2		22.2
27	Total	(34.5)	14.8	14.8	-	14.8	(52.4)	4.9	4.9	-	4.9	(63.2)	(4.7)	(4.7)	-	(4.7)	(59.9)	(1.6)	(1.6)	-	(1.6)
28	Forecast Production (TWh)	38.1	38.1	38.1		38.1	38.5	38.5	38.5		38.5	39.0	39.0	39.0		39.0	37.4	37.4	37.4		37.4



OEB Adjustment Input Sheet

		2017										2018										Nuclear Facilities										2019										2020										2021									
Line No.	Description	OPG Proposed 5/27/2016	N1 Update 12/19/2016	N2 Update 2/17/2017	OEB Adjustment	OEB Approved	OPG Proposed 5/27/2016	N1 Update 12/19/2016	N2 Update 2/17/2017	OEB Adjustment	OEB Approved	OPG Proposed 5/27/2016	N1 Update 12/19/2016	N2 Update 2/17/2017	OEB Adjustment	OEB Approved	OPG Proposed 5/27/2016	N1 Update 12/19/2016	N2 Update 2/17/2017	OEB Adjustment	OEB Approved	OPG Proposed 5/27/2016	N1 Update 12/19/2016	N2 Update 2/17/2017	OEB Adjustment	OEB Approved	OPG Proposed 5/27/2016	N1 Update 12/19/2016	N2 Update 2/17/2017	OEB Adjustment	OEB Approved																														
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	(t)	(u)	(v)	(w)	(x)	(y)	(z)	(aa)	(ab)	(ac)	(ad)	(ae)																													
Applicable Tax Rates																																																													
29	Federal Rate	15.00%	15.00%	15.00%		15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%																													
30	Provincial Rate	10.00%	10.00%	10.00%		10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%	10.00%																													
31	Total Tax Rate	25.00%	25.00%	25.00%	-	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%																													
Tax Credits and Payment Adjustments (\$M)																																																													
32	SR&ED Investment	(18.4)	(18.4)	(18.4)		(18.4)	(18.4)	(18.4)	(18.4)	(18.4)	(18.4)	(18.4)	(18.4)	(18.4)	(18.4)	(18.4)	(18.4)	(18.4)	(18.4)	(18.4)	(18.4)	(18.4)	(18.4)	(18.4)	(18.4)	(18.4)	(18.4)	(18.4)	(18.4)	(18.4)	(18.4)	(18.4)																													
Taxable Income Adjustments (\$M)																																																													
Additions																																																													
33	Depreciation and Amortization	346.9	373.9	367.0		367.0	378.7	405.7	395.0		395.0	384.0	411.0	400.3		400.3	524.9	551.9	541.2		541.2	338.1	327.3	316.7		316.7																																			
34	Pension and OPEB Accrual	272.0	291.2	291.2		291.2	280.4	296.7	298.7		298.7	289.5	343.3	343.3		343.3	271.3	352.3	352.3		352.3	279.9	359.2	359.2		359.2																																			
35	Regulatory Liability Amortization - Income and Other Taxes Variance Acct	(2.2)	(2.2)	(2.2)		(2.2)	(2.2)	(2.2)	(2.2)		(2.2)	-	-	-		-	-	-	-		-	-	-	-	-		-																																		
36	Regulatory Asset Amortization - Bruce Lease Net Revenues Variance Acct	(24.0)	(24.0)	(24.0)		(24.0)	(24.0)	(24.0)	(24.0)		(24.0)	-	-	-		-	-	-	-		-	-	-	-	-		-																																		
37	Taxable SR&ED Investment Tax Credits	18.4	18.4	18.4		18.4	18.4	18.4	18.4		18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4	18.4																													
38	Adjustment Related to Financing Cost for Nuclear Liabilities	39.6	35.9	35.9		35.9	37.1	22.1	22.1		22.1	34.5	18.3	18.3		18.3	31.9	14.5	14.5		14.5	30.2	12.4	12.4		12.4																																			
39	Nuclear Waste Management Expenses	57.8	63.9	63.9		63.9	59.8	63.2	63.2		63.2	72.1	77.9	77.9		77.9	61.9	66.5	66.5		66.5	63.1	68.8	68.8		68.8																																			
40	Receipts from Nuclear Segregated Funds	85.0	84.4	84.4		84.4	108.3	85.7	85.7		85.7	140.0	120.4	120.4		120.4	208.4	152.0	152.0		152.0	191.6	193.7	193.7		193.7																																			
41	Other	63.7	63.7	63.7		63.7	49.2	49.2	49.2		49.2	38.4	38.4	38.4		38.4	38.6	38.6	38.6		38.6	40.2	40.2	40.2		40.2																																			
42	Total Additions	857.2	895.2	888.4	-	888.4	905.7	916.9	906.2	-	906.2	976.8	1,027.6	1,016.9	-	1,016.9	1,155.4	1,194.1	1,183.4	-	1,183.4	961.4	1,019.9	1,009.3	-	1,009.3																																			
Deductions																																																													
43	CCA	394.2	394.2	394.2		394.2	504.4	504.4	504.4		504.4	571.1	571.1	571.1		571.1	594.8	594.8	594.8		594.8	597.0	597.0	597.0		597.0																																			
44	Cash Expenditures for Nuclear Waste & Decommissioning	166.0	217.5	217.5		217.5	177.4	227.9	227.9		227.9	200.6	232.8	232.8		232.8	230.7	283.6	283.6		283.6	228.0	317.0	317.0		317.0																																			
45	Contributions to Nuclear Segregated Funds	156.1	-	-		-	175.3	-	-		-	265.7	-	-		-	35.2	-	-		-	35.2	-	-		-																																			
46	Pension Plan Contributions	171.1	200.0	200.0		200.0	175.5	202.9	202.9		202.9	180.3	243.5	243.5		243.5	167.2	247.9	247.9		247.9	162.1	250.6	250.6		250.6																																			
47	OPEB/SPP Payments	100.9	91.1	91.1		91.1	104.9	95.7	95.7		95.7	109.2	99.9	99.9		99.9	114.1	104.3	104.3		104.3	117.8	108.5	108.5		108.5																																			
48	Deductible SR&ED Qualifying Expenditures	27.7	27.7	27.7		27.7	27.7	27.7	27.7		27.7	27.7	27.7	27.7		27.7	27.7	27.7	27.7		27.7	27.7	27.7	27.7		27.7																																			
49	Other	20.3	20.3	20.3		20.3	0.1	0.1	0.1		0.1	1.1	1.1	1.1		1.1	5.7	5.7	5.7		5.7	16.5	16.5	16.5		16.5																																			
50	Total Deductions	1,036.2	950.9	950.9	-	950.9	1,165.4	1,058.8	1,058.8	-	1,058.8	1,355.7	1,176.0	1,176.0	-	1,176.0	1,165.4	1,264.1	1,264.1	-	1,264.1	1,184.3	1,317.4	1,317.4	-	1,317.4																																			

Deferral Accounts											
Line No.	Description	OPG Proposed 5/27/2016	N1 Update 12/19/2016	N2 Update 2/17/2017	OEB Adjustment	OEB Approved	OPG Proposed 5/27/2016	N1 Update 12/19/2016	N2 Update 2/17/2017	OEB Adjustment	OEB Approved
Hydroelectric Facilities (\$M)											
51	Hydroelectric Water Conditions Variance	(8.7)	(8.7)	(8.7)		(8.7)	(8.7)	(8.7)	(8.7)		(8.7)
52	Ancillary Services Net Revenue Variance - Hydroelectric	(6.6)	(6.6)	(6.6)		(6.6)	(6.6)	(6.6)	(6.6)		(6.6)
53	Hydroelectric Incentive Mechanism Variance	(0.0)	(0.0)	(0.0)		(0.0)	(0.0)	(0.0)	(0.0)		(0.0)
54	Hydroelectric Surplus Baseload Generation Variance	41.2	41.2	41.2		41.2	41.2	41.2	41.2		41.2
55	Income and Other Taxes Variance - Hydroelectric	(0.0)	(0.0)	(0.0)		(0.0)	(0.0)	(0.0)	(0.0)		(0.0)
56	Capacity Refurbishment Variance - Hydroelectric	1.6	1.6	1.6		1.6	1.6	1.6	1.6		1.6
57	Pension and OPEB Cost Variance - Hydroelectric - Future	1.1	1.1	1.1		1.1	1.1	1.1	1.1		1.1
58	Pension and OPEB Cost Variance - Hydroelectric - Post 2012 Additions	5.9	5.9	5.9		5.9	5.9	5.9	5.9		5.9
59	Pension & OPEB Cash Payment Variance - Hydroelectric	2.1	2.1	2.1		2.1	2.1	2.1	2.1		2.1
60	Hydroelectric Deferral and Variance Over/Under Recovery Variance	6.7	6.7	6.7		6.7	6.7	6.7	6.7		6.7
61	Total	43.4	43.4	43.4	-	43.4	43.4	43.4	43.4	-	43.4
Nuclear Facilities (\$M)											
62	Nuclear Development Variance	0.9	0.9	0.9		0.9	0.9	0.9	0.9		0.9
63	Ancillary Services Net Revenue Variance - Nuclear	0.5	0.5	0.5		0.5	0.5	0.5	0.5		0.5
64	Capacity Refurbishment Variance - Nuclear - Capital Portion	(18.8)	(18.8)	(18.8)		(18.8)	(18.8)	(18.8)	(18.8)		(18.8)
65	Capacity Refurbishment Variance - Nuclear - Non-Capital Portion	(15.8)	(15.8)	(15.8)		(15.8)	(15.8)	(15.8)	(15.8)		(15.8)
66	Bruce Lease Net Revenues Variance - Derivative Sub-Account	(34.3)	(34.3)	(34.3)		(34.3)	(34.3)	(34.3)	(34.3)		(34.3)
67	Bruce Lease Net Revenues Variance - Non-Derivative Sub-Account - Post 2012	10.3	10.3	10.3		10.3	10.3	10.3	10.3		10.3
68	Additions						10.3				10.3
69	Income and Other Taxes Variance - Nuclear	(2.2)	(2.2)	(2.2)		(2.2)	(2.2)	(2.2)	(2.2)		(2.2)
70	Pension and OPEB Cost Variance - Nuclear - Future	21.5	21.5	21.5		21.5	21.5	21.5	21.5		21.5
71	Pension and OPEB Cost Variance - Nuclear - Post 2012 Additions	113.1	113.1	113.1		113.1	113.1	113.1	113.1		113.1
72	Pension & OPEB Cash Payment Variance - Nuclear	11.7	11.7	11.7		11.7	11.7	11.7	11.7		11.7
73	Nuclear Deferral and Variance Over/Under Recovery Variance	22.1	22.1	22.1		22.1	22.1	22.1	22.1		22.1
74	Total	108.9	108.9	108.9	-	108.9	108.9	108.9	108.9	-	108.9



OPG Rate Base and Cost of Capital

OPG Rate Base and Cost of Capital

		Total Generating Facilities					Nuclear Facilities																			
Line No.	Description	2017					2018					2019					2020					2021				
		OPG Proposed 5/27/2016	N1 Update 12/19/2016	N2 Update 2/17/2017	OEB Adjustment (c)	OEB Approved (d)	OPG Proposed 5/27/2016	N1 Update 12/19/2016	N2 Update 2/17/2017	OEB Adjustment (g)	OEB Approved (h)	OPG Proposed 5/27/2016	N1 Update 12/19/2016	N2 Update 2/17/2017	OEB Adjustment (k)	OEB Approved (l)	OPG Proposed 5/27/2016	N1 Update 12/19/2016	N2 Update 2/17/2017	OEB Adjustment (o)	OEB Approved (p)	OPG Proposed 5/27/2016	N1 Update 12/19/2016	N2 Update 2/17/2017	OEB Adjustment (s)	OEB Approved (t)
		(a)	(b)	(b)	(c)	(d)	(e)	(f)	(f)	(g)	(h)	(i)	(j)	(j)	(k)	(l)	(m)	(n)	(n)	(o)	(p)	(q)	(r)	(r)	(s)	(t)
1	Nuclear Rate Base Financed by Capital Structure (\$M)	3,344.4	3,344.4	3,103.9	-	3,103.9	3,513.9	3,513.9	3,160.2	-	3,160.2	3,449.8	3,449.8	3,106.8	-	3,106.8	7,494.0	7,494.0	7,161.7	-	7,161.7	7,959.1	7,959.1	7,637.4	-	7,637.4
2	Nuclear Allocation Factor*	30.90%	30.90%	29.33%	0.00%	29.33%	31.96%	31.96%	29.70%	0.00%	29.70%	31.58%	31.58%	29.36%	0.00%	29.36%	49.70%	49.70%	48.56%	0.00%	48.56%	50.88%	50.88%	49.85%	0.00%	49.85%
		2017					2018					2019					2020					2021				
Line No.	Description	OPG Proposed 5/27/2016	N1 Update 12/19/2016	N2 Update 2/17/2017	OEB Adjustment (c)	OEB Approved (d)	OPG Proposed 5/27/2016	N1 Update 12/19/2016	N2 Update 2/17/2017	OEB Adjustment (g)	OEB Approved (h)	OPG Proposed 5/27/2016	N1 Update 12/19/2016	N2 Update 2/17/2017	OEB Adjustment (k)	OEB Approved (l)	OPG Proposed 5/27/2016	N1 Update 12/19/2016	N2 Update 2/17/2017	OEB Adjustment (o)	OEB Approved (p)	OPG Proposed 5/27/2016	N1 Update 12/19/2016	N2 Update 2/17/2017	OEB Adjustment (s)	OEB Approved (t)
Capitalization (\$M)		(a)	(b)	(b)	(c)	(d)	(e)	(f)	(f)	(g)	(h)	(i)	(j)	(j)	(k)	(l)	(m)	(n)	(n)	(o)	(p)	(q)	(r)	(r)	(s)	(t)
3	Total Rate Base	4,119.8	3,868.4	3,627.9	-	3,627.9	4,239.0	3,960.6	3,606.9	-	3,606.9	4,124.7	3,819.3	3,476.2	-	3,476.2	8,118.6	7,786.2	7,453.8	-	7,453.8	8,549.2	8,208.6	7,887.0	-	7,887.0
4	Adjustment for Lesser of UNL/ARC	775.4	524.0	524.0	-	524.0	725.1	446.7	446.7	-	446.7	674.9	369.5	369.5	-	369.5	624.6	292.2	292.2	-	292.2	590.1	249.6	249.6	-	249.6
5	Rate Base Financed by Capital Structure	3,344.4	3,344.4	3,103.9	-	3,103.9	3,513.9	3,513.9	3,160.2	-	3,160.2	3,449.8	3,449.8	3,106.8	-	3,106.8	7,494.0	7,494.0	7,161.7	-	7,161.7	7,959.1	7,959.1	7,637.4	-	7,637.4
6	Common Equity	1,638.7	1,638.7	1,520.9	-	1,520.9	1,721.8	1,721.8	1,548.5	-	1,548.5	1,690.4	1,690.4	1,522.3	-	1,522.3	3,672.1	3,672.1	3,509.2	-	3,509.2	3,899.9	3,899.9	3,742.3	-	3,742.3
7	Total Debt	1,705.6	1,705.6	1,583.0	-	1,583.0	1,792.1	1,792.1	1,611.7	-	1,611.7	1,759.4	1,759.4	1,584.5	-	1,584.5	3,821.9	3,821.9	3,652.4	-	3,652.4	4,059.1	4,059.1	3,895.1	-	3,895.1
8	Short-Term Debt	11.5	11.5	10.9	(0.0)	10.9	11.8	11.8	11.0	-	11.0	11.7	11.7	10.9	(0.0)	10.9	18.4	18.4	18.0	-	18.0	18.9	18.9	18.5	0.0	18.5
9	Existing and Planned Long-Term Debt	889.5	889.5	844.3	(0.0)	844.3	1,012.6	1,012.6	940.9	-	940.9	1,102.1	1,024.7	1,024.7	(0.0)	1,024.7	1,753.1	1,753.1	1,713.1	-	1,713.1	1,733.0	1,733.0	1,697.9	0.0	1,697.9
10	Other Long-Term Debt Provision	804.6	804.6	727.8	0.0	727.8	767.7	767.7	659.8	-	659.8	645.6	645.6	548.9	0.0	548.9	2,050.4	2,050.4	1,921.3	-	1,921.3	2,307.3	2,307.3	2,178.7	(0.0)	2,178.7
Cost of Capital (\$M)																										
11	Adjustment for Lesser of UNL/ARC	39.6	25.9	25.9	-	25.9	37.1	22.1	22.1	-	22.1	34.5	18.3	18.3	-	18.3	31.9	14.5	14.5	-	14.5	30.2	12.4	12.4	-	12.4
12	Common Equity	150.6	143.9	133.5	-	133.5	158.2	151.2	136.0	-	136.0	155.3	148.4	133.7	-	133.7	337.5	322.4	308.1	-	308.1	358.4	342.4	328.6	-	328.6
13	Existing and Planned Long-Term Debt	43.5	43.5	41.3	(0.0)	41.3	46.6	46.6	43.3	-	43.3	49.8	49.8	46.3	(0.0)	46.3	78.8	78.8	77.0	-	77.0	77.6	77.6	76.1	0.0	76.1
14	Other Long-Term Debt Provision	39.3	39.3	35.6	0.0	35.6	35.3	35.3	30.3	-	30.3	29.2	29.2	24.8	0.0	24.8	92.1	92.1	86.3	-	86.3	103.4	103.4	97.6	(0.0)	97.6

\* Uses Principal Rate Base Financed by Capital Structure from C1-1-1.

OPG Regulatory Income Taxes

		Nuclear Generating Facilities																								
Line No.	Description	2017					2018					2019					2020					2021				
		OPG Proposed	N1 Update	N2 Update	OEB Adjustment	OEB Approved	OPG Proposed	N1 Update	N2 Update	OEB Adjustment	OEB Approved	OPG Proposed	N1 Update	N2 Update	OEB Adjustment	OEB Approved	OPG Proposed	N1 Update	N2 Update	OEB Adjustment	OEB Approved	OPG Proposed	N1 Update	N2 Update	OEB Adjustment	OEB Approved
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	(t)					
Applicable Tax Rates																										
1	Federal Rate	15.00%	15.00%	15.00%	0.00%	15.00%	15.00%	15.00%	15.00%	0.00%	15.00%	15.00%	15.00%	15.00%	0.00%	15.00%	15.00%	15.00%	15.00%	0.00%	15.00%	15.00%	15.00%	15.00%	0.00%	15.00%
2	Provincial Rate	10.00%	10.00%	10.00%	0.00%	10.00%	10.00%	10.00%	10.00%	0.00%	10.00%	10.00%	10.00%	10.00%	0.00%	10.00%	10.00%	10.00%	10.00%	0.00%	10.00%	10.00%	10.00%	10.00%	0.00%	10.00%
3	Total Tax Rate	25.00%	25.00%	25.00%	0.00%	25.00%	25.00%	25.00%	25.00%	0.00%	25.00%	25.00%	25.00%	25.00%	0.00%	25.00%	25.00%	25.00%	25.00%	0.00%	25.00%	25.00%	25.00%	25.00%	0.00%	25.00%
Taxable Income (\$M)																										
4	Earnings Before Tax	198.3	171.2	143.7	-	143.7	214.2	152.5	134.7	-	134.7	222.8	160.5	142.7	-	142.7	470.8	413.7	391.1	-	391.1	503.2	383.6	361.6	-	361.6
5	Adjustments: Additions	857.2	895.2	888.4	-	888.4	905.7	916.9	906.2	-	906.2	976.8	1,027.6	1,016.9	-	1,016.9	1,155.4	1,194.1	1,183.4	-	1,183.4	961.4	1,019.9	1,009.3	-	1,009.3
6	Adjustments: Deductions	1,036.2	950.9	950.9	-	950.9	1,165.4	1,058.8	1,058.8	-	1,058.8	1,355.7	1,176.0	1,176.0	-	1,176.0	1,165.4	1,264.1	1,264.1	-	1,264.1	1,184.3	1,317.4	1,317.4	-	1,317.4
7	Tax Loss Carry-Over	(19.3)	-	(34.4)	-	(34.4)	45.5	-	18.0	-	18.0	156.1	-	16.4	-	16.4	(182.3)	-	-	-	-	-	-	-	-	-
8	Total Taxable Income	0.0	115.5	46.7	-	46.7	0.0	10.6	0.0	-	0.0	0.0	12.0	0.0	-	0.0	278.4	343.7	310.4	-	310.4	280.2	86.2	53.5	-	53.5
Income Taxes (\$M)																										
9	Federal Income Taxes	0.0	17.3	7.0	-	7.0	0.0	1.6	0.0	-	0.0	0.0	1.8	0.0	-	0.0	41.8	51.6	46.6	-	46.6	42.0	12.9	8.0	-	8.0
10	Provincial Income Taxes	0.0	11.6	4.7	-	4.7	0.0	1.1	0.0	-	0.0	0.0	1.2	0.0	-	0.0	27.8	34.4	31.0	-	31.0	26.0	8.6	5.4	-	5.4
11	Tax Credits (SR&ED Investment)	(18.4)	(18.4)	(18.4)	-	(18.4)	(18.4)	(18.4)	(18.4)	-	(18.4)	(18.4)	(18.4)	(18.4)	-	(18.4)	(18.4)	(18.4)	(18.4)	-	(18.4)	(18.4)	(18.4)	(18.4)	-	(18.4)
12	Total Income Taxes	(18.4)	10.5	(6.7)	-	(6.7)	(18.4)	(15.8)	(18.4)	-	(18.4)	(18.4)	(15.4)	(18.4)	-	(18.4)	51.2	67.5	59.2	-	59.2	51.7	3.2	(5.0)	-	(5.0)
Earnings Before Tax (\$M)																										
13	Requested After Tax ROE	150.6	143.9	133.5	-	133.5	158.2	151.2	136.0	-	136.0	155.3	148.4	133.7	-	133.7	337.5	322.4	308.1	-	308.1	358.4	342.4	328.6	-	328.6
14	Bruce Lease Net Revenues	(66.1)	(16.9)	(16.9)	-	(16.9)	(74.3)	(17.1)	(17.1)	-	(17.1)	(85.9)	(27.4)	(27.4)	-	(27.4)	(82.1)	(23.8)	(23.8)	-	(23.8)	(93.1)	(38.1)	(38.1)	-	(38.1)
15	Total Regulatory Income Taxes After Tax Loss Carry-Over	(18.4)	10.5	(6.7)	-	(6.7)	(18.4)	(15.8)	(18.4)	-	(18.4)	(18.4)	(15.4)	(18.4)	-	(18.4)	51.2	67.5	59.2	-	59.2	51.7	3.2	(5.0)	-	(5.0)
16	Total Earnings Before Tax	198.3	171.2	143.7	-	143.7	214.2	152.5	134.7	-	134.7	222.8	160.5	142.7	-	142.7	470.8	413.7	391.1	-	391.1	503.2	383.6	361.6	-	361.6
Adjustments (\$M)																										
Additions																										
17	Depreciation and Amortization	346.9	373.9	367.0	-	367.0	378.7	405.7	395.0	-	395.0	384.0	411.0	400.3	-	400.3	524.9	551.9	541.2	-	541.2	338.1	327.3	316.7	-	316.7
18	Pension and OPEB Accrual	272.0	291.2	291.2	-	291.2	280.4	298.7	298.7	-	298.7	289.5	343.3	343.3	-	343.3	271.3	352.3	352.3	-	352.3	279.9	359.2	359.2	-	359.2
19	Regulatory Liability Amortization - Income and Other Taxes Variance Account	(2.2)	(2.2)	(2.2)	-	(2.2)	(2.2)	(2.2)	(2.2)	-	(2.2)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	Regulatory Asset Amortization - Bruce Regulatory Asset	(24.0)	(24.0)	(24.0)	-	(24.0)	(24.0)	(24.0)	(24.0)	-	(24.0)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	Adjustment Related to Financing Cost for Nuclear Liabilities	18.4	18.4	18.4	-	18.4	18.4	18.4	18.4	-	18.4	18.4	18.4	18.4	-	18.4	18.4	18.4	18.4	-	18.4	18.4	18.4	18.4	-	18.4
22	Nuclear Waste Management Expenses	39.6	25.9	25.9	-	25.9	37.1	22.1	22.1	-	22.1	34.5	18.3	18.3	-	18.3	31.9	14.5	14.5	-	14.5	30.2	12.4	12.4	-	12.4
23	Receipts from Nuclear Segregated Funds	57.8	63.9	63.9	-	63.9	59.8	63.2	63.2	-	63.2	72.1	77.9	77.9	-	77.9	61.9	66.5	66.5	-	66.5	63.1	68.8	68.8	-	68.8
24	Other	85.0	84.4	84.4	-	84.4	108.3	85.7	85.7	-	85.7	140.0	120.4	120.4	-	120.4	208.4	152.0	152.0	-	152.0	191.6	193.7	193.7	-	193.7
25	Total Additions	63.7	895.2	888.4	-	888.4	905.7	916.9	906.2	-	906.2	976.8	1,027.6	1,016.9	-	1,016.9	1,155.4	1,194.1	1,183.4	-	1,183.4	961.4	1,019.9	1,009.3	-	1,009.3
Deductions																										
26	CCA	394.2	394.2	394.2	-	394.2	504.4	504.4	504.4	-	504.4	571.1	571.1	571.1	-	571.1	594.8	594.8	594.8	-	594.8	597.0	597.0	597.0	-	597.0
27	Cash Expenditures for Nuclear Waste & Decommissioning	166.0	217.5	217.5	-	217.5	177.4	227.9	227.9	-	227.9	200.6	232.8	232.8	-	232.8	230.7	283.6	283.6	-	283.6	228.0	317.0	317.0	-	317.0
28	Contributions to Nuclear Segregated Funds and Earnings	156.1	-	-	-	-	175.3	-	-	-	-	265.7	-	-	-	-	35.2	-	-	-	-	35.2	-	-	-	-
29	Pension Plan Contributions	171.1	200.0	200.0	-	200.0	175.5	202.9	202.9	-	202.9	180.3	243.5	243.5	-	243.5	157.2	247.9	247.9	-	247.9	162.1	250.6	250.6	-	250.6
30	OPEB Payments	100.9	91.1	91.1	-	91.1	104.9	95.7	95.7	-	95.7	109.2	99.9	99.9	-	99.9	114.1	104.3	104.3	-	104.3	117.8	108.5	108.5	-	108.5
31	SR&ED Costs Capitalized for Accounting	27.7	27.7	27.7	-	27.7	27.7	27.7	27.7	-	27.7	27.7	27.7	27.7	-	27.7	27.7	27.7	27.7	-	27.7	27.7	27.7	27.7	-	27.7
32	Other	20.3	20.3	20.3	-	20.3	0.1	0.1	0.1	-	0.1	1.1	1.1	1.1	-	1.1	5.7	5.7	5.7	-	5.7	16.5	16.5	16.5	-	16.5
33	Total Deductions	1,036.2	950.9	950.9	-	950.9	1,165.4	1,058.8	1,058.8	-	1,058.8	1,355.7	1,176.0	1,176.0	-	1,176.0	1,165.4	1,264.1	1,264.1	-	1,264.1	1,184.3	1,317.4	1,317.4	-	1,317.4

Numbers may not add due to rounding

OPG Revenue Requirement

		Nuclear Facilities																								
Line No.	Description	2017					2018					2019					2020					2021				
		OPG Proposed	N1 Update	N2 Update	OEB	OEB	OPG Proposed	N1 Update	N2 Update	OEB	OEB	OPG Proposed	N1 Update	N2 Update	OEB	OEB	OPG Proposed	N1 Update	N2 Update	OEB	OEB	OPG Proposed	N1 Update	N2 Update	OEB	OEB
		5/27/2016	12/19/2016	2/17/2017	Adjustment	Approved	5/27/2016	12/19/2016	2/17/2017	Adjustment	Approved	5/27/2016	12/19/2016	2/17/2017	Adjustment	Approved	5/27/2016	12/19/2016	2/17/2017	Adjustment	Approved	5/27/2016	12/19/2016	2/17/2017	Adjustment	Approved
		(a)	(b)	(b)	(c)	(d)	(e)	(f)	(f)	(g)	(h)	(i)	(j)	(j)	(k)	(l)	(m)	(n)	(n)	(o)	(p)	(q)	(r)	(r)	(s)	(t)
Cost of Capital (\$M)																										
1	Short-term Debt*	0.9	0.9	0.9	(0.0)	0.8	1.1	1.1	1.0	(0.0)	1.0	1.2	1.2	1.1	(0.0)	1.1	1.9	1.9	1.9	(0.0)	1.8	1.9	1.9	1.9	(0.0)	1.8
2	Long-Term Debt	82.8	82.8	76.8	0.0	76.8	81.9	81.9	73.6	0.0	73.6	79.0	79.0	71.2	0.0	71.2	170.9	170.9	163.3	0.0	163.3	181.0	181.0	173.7	0.0	173.7
3	ROE	150.6	143.9	133.5	0.0	133.5	158.2	151.2	136.0	0.0	136.0	155.3	148.4	133.7	0.0	133.7	337.5	322.4	308.1	0.0	308.1	358.4	342.4	328.6	0.0	328.6
4	Adjustment for Lesser of UNL/ARC	39.6	25.9	25.9	0.0	25.9	37.1	22.1	22.1	0.0	22.1	34.5	18.3	18.3	0.0	18.3	31.9	14.5	14.5	0.0	14.5	30.2	12.4	12.4	0.0	12.4
5	Total	273.9	253.5	237.1	(0.0)	237.1	278.2	256.2	232.7	(0.0)	232.7	270.1	246.9	224.2	(0.0)	224.2	542.1	509.6	487.7	(0.0)	487.7	571.5	537.7	516.5	(0.0)	516.4
Expenses (\$M)																										
6	OM&A	2,318.6	2,346.0	2,346.0	0.0	2,346.0	2,327.1	2,351.4	2,351.4	0.0	2,351.4	2,347.9	2,425.1	2,425.1	0.0	2,425.1	2,368.0	2,469.0	2,469.0	0.0	2,469.0	2,248.7	2,349.1	2,349.1	0.0	2,349.1
7	Fuel	219.9	218.2	218.2	0.0	218.2	222.0	219.9	219.9	0.0	219.9	233.1	232.1	232.1	0.0	232.1	228.2	224.4	224.4	0.0	224.4	212.7	209.1	209.1	0.0	209.1
8	Depreciation/Amortization	346.9	373.9	367.0	0.0	367.0	378.7	405.7	395.0	0.0	395.0	384.0	411.0	400.3	0.0	400.3	524.9	551.9	541.2	0.0	541.2	338.1	327.3	316.7	0.0	316.7
9	Property Taxes	14.6	14.6	14.6	0.0	14.6	14.9	14.9	14.9	0.0	14.9	15.3	15.3	15.3	0.0	15.3	15.7	15.7	15.7	0.0	15.7	17.0	17.0	17.0	0.0	17.0
10	Total	2,900.0	2,952.6	2,945.8	0.0	2,945.8	2,942.8	2,991.9	2,981.2	0.0	2,981.2	2,980.3	3,083.5	3,072.8	0.0	3,072.8	3,136.7	3,261.0	3,250.3	0.0	3,250.3	2,816.5	2,902.5	2,891.8	0.0	2,891.8
Other Revenues (\$M)																										
11	Bruce Lease Net Revenues	(66.1)	(16.9)	(16.9)	0.0	(16.9)	(74.3)	(17.1)	(17.1)	0.0	(17.1)	(85.9)	(27.4)	(27.4)	0.0	(27.4)	(82.1)	(23.8)	(23.8)	0.0	(23.8)	(93.1)	(38.1)	(38.1)	0.0	(38.1)
12	Ancillary and Other Revenue	31.7	31.7	31.7	0.0	31.7	22.0	22.0	22.0	0.0	22.0	22.7	22.7	22.7	0.0	22.7	22.2	22.2	22.2	0.0	22.2	22.9	22.9	22.9	0.0	22.9
13	Total	(34.5)	14.8	14.8	0.0	14.8	(52.4)	4.9	4.9	0.0	4.9	(63.2)	(4.7)	(4.7)	0.0	(4.7)	(59.9)	(1.6)	(1.6)	0.0	(1.6)	(70.2)	(15.1)	(15.1)	0.0	(15.1)
Regulatory Income Tax (\$M)																										
14	Total	(18.4)	10.5	(6.7)	0.0	(6.7)	(18.4)	(15.8)	(18.4)	0.0	(18.4)	(18.4)	(15.4)	(18.4)	0.0	(18.4)	51.2	67.5	59.2	0.0	59.2	51.7	3.2	(5.0)	0.0	(5.0)
15	Revenue Requirement (\$M)	3,189.9	3,201.8	3,161.4	(0.0)	3,161.4	3,255.0	3,227.5	3,190.7	(0.0)	3,190.6	3,295.1	3,319.8	3,283.4	(0.0)	3,283.3	3,790.0	3,839.8	3,798.8	(0.0)	3,798.8	3,509.8	3,458.4	3,418.4	(0.0)	3,418.3

\* Uses Principal Rate Base Financed by Capital Structure from C1-1-1, Tables 1-5  
Numbers may not add due to rounding



OPG Revenue Requirement Deficiency / (Sufficiency)

		Nuclear Facilities																								
Line No.	Description	2017					2018					2019					2020					2021				
		OPG Proposed 5/27/2016	N1 Update 12/19/2016	N2 Update 2/17/2017	OEB Adjustment	OEB Approved	OPG Proposed 5/27/2016	N1 Update 12/19/2016	N2 Update 2/17/2017	OEB Adjustment	OEB Approved	OPG Proposed 5/27/2016	N1 Update 12/19/2016	N2 Update 2/17/2017	OEB Adjustment	OEB Approved	OPG Proposed 5/27/2016	N1 Update 12/19/2016	N2 Update 2/17/2017	OEB Adjustment	OEB Approved	OPG Proposed 5/27/2016	N1 Update 12/19/2016	N2 Update 2/17/2017	OEB Adjustment	OEB Approved
		(a)	(b)	(b)	(c)	(d)	(e)	(f)	(f)	(g)	(h)	(i)	(j)	(j)	(k)	(l)	(m)	(n)	(n)	(o)	(p)	(q)	(r)	(r)	(s)	(t)
Production & Revenue																										
1	Forecast Production (TWh)	38.1	38.1	38.1	0.0	38.1	38.5	38.5	38.5	0.0	38.5	39.0	39.0	39.0	0.0	39.0	37.4	37.4	37.4	0.0	37.4	35.4	35.4	35.4	0.0	35.4
2	Current Payment Rate (\$/MWh)	59.29	59.29	59.29	0.00	59.29	59.29	59.29	59.29	0.00	59.29	59.29	59.29	59.29	0.00	59.29	59.29	59.29	59.29	0.00	59.29	59.29	59.29	59.29	0.00	59.29
3	Revenue From Current Payment Rate (\$M)	2,258.9	2,258.9	2,258.9	0.0	2,258.9	2,280.9	2,280.9	2,280.9	0.0	2,280.9	2,313.9	2,313.9	2,313.9	0.0	2,313.9	2,214.8	2,214.8	2,214.8	0.0	2,214.8	2,097.9	2,097.9	2,097.9	0.0	2,097.9
Revenue Requirement																										
4	Revenue Requirement (\$M)	3,189.9	3,201.8	3,161.4	(0.0)	3,161.4	3,255.0	3,227.5	3,190.7	(0.0)	3,190.6	3,295.1	3,319.8	3,283.4	(0.0)	3,283.3	3,790.0	3,839.8	3,798.8	(0.0)	3,798.8	3,509.8	3,458.4	3,418.4	(0.0)	3,418.3
5	Revenue Requirement Deficiency (Sufficiency) (\$M)	931.1	943.0	902.5	(0.0)	902.5	974.0	946.0	909.7	(0.0)	909.7	981.2	1,005.9	969.5	(0.0)	969.5	1,575.2	1,625.0	1,584.0	(0.0)	1,584.0	1,411.9	1,360.6	1,320.5	(0.0)	1,320.5

Numbers may not add due to rounding

OPG Requested Payment Amounts

OPG Requested Payment Amounts

		Hydroelectric Facilities																													
Line No.	Description	2017						2018						2019						2020						2021					
		OPG Proposed	N1 Update	N2 Update	N3 Update	OEB	OEB	OPG Proposed	N1 Update	N2 Update	N3 Update	OEB	OEB	OPG Proposed	N1 Update	N2 Update	N3 Update	OEB	OEB	OPG Proposed	N1 Update	N2 Update	N3 Update	OEB	OEB	OPG Proposed	N1 Update	N2 Update	N3 Update	OEB	OEB
		5/27/2016	12/19/2016	2/17/2017	3/8/2017	Adjustment	Approved	5/27/2016	12/19/2016	2/17/2017	3/8/2017	Adjustment	Approved	5/27/2016	12/19/2016	2/17/2017	3/8/2017	Adjustment	Approved	5/27/2016	12/19/2016	2/17/2017	3/8/2017	Adjustment	Approved	5/27/2016	12/19/2016	2/17/2017	3/8/2017	Adjustment	Approved
1	Requested Payment Amount (\$/MWh)	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	(t)	(u)	(v)	(w)	(x)	(y)	(z)	(aa)	(bb)	(cc)	
		41.71	41.71	41.71	41.71	41.71	42.33	42.33	42.33	42.33		42.33	42.97	42.97	42.97	42.97		42.97	43.61	43.61	43.61	43.61		43.61	44.27	44.27	44.27	44.27		44.27	

		Nuclear Facilities																													
Line No.	Description	2017						2018						2019						2020						2021					
		OPG Proposed	N1 Update	N2 Update	N3 Update	OEB	OEB	OPG Proposed	N1 Update	N2 Update	N3 Update	OEB	OEB	OPG Proposed	N1 Update	N2 Update	N3 Update	OEB	OEB	OPG Proposed	N1 Update	N2 Update	N3 Update	OEB	OEB	OPG Proposed	N1 Update	N2 Update	N3 Update	OEB	OEB
		5/27/2016	12/19/2016	2/17/2017	3/8/2017	Adjustment	Approved	5/27/2016	12/19/2016	2/17/2017	3/8/2017	Adjustment	Approved	5/27/2016	12/19/2016	2/17/2017	3/8/2017	Adjustment	Approved	5/27/2016	12/19/2016	2/17/2017	3/8/2017	Adjustment	Approved	5/27/2016	12/19/2016	2/17/2017	3/8/2017	Adjustment	Approved
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	(t)	(u)	(v)	(w)	(x)	(y)	(z)	(aa)	(bb)	(cc)	
2	Revenue Requirement (\$M)	3,189.9	3,201.8	3,161.4	3,161.4	(0.0)	3,161.4	3,255.0	3,227.5	3,190.7	3,190.7	(0.0)	3,190.6	3,295.1	3,319.8	3,283.4	3,283.4	(0.0)	3,283.3	3,790.0	3,839.8	3,798.8	3,798.8	(0.0)	3,798.8	3,509.8	3,458.4	3,418.4	3,418.4	(0.0)	3,418.3
3	Stretch Adjustment (\$M)	N/A	N/A	N/A	N/A		0.0	5.0	5.0	5.0	5.0		5.0	10.1	10.2	10.2	10.2	0.0	10.2	15.2	15.3	15.3	15.3	0.0	15.3	20.4	20.6	20.6	20.6	0.0	20.6
4	Forecast Production (TWh)	38.1	38.1	38.1	38.1	0.0	38.1	38.5	38.5	38.5	38.5	0.0	38.5	39.0	39.0	39.0	39.0	0.0	39.0	37.4	37.4	37.4	37.4	0.0	37.4	35.4	35.4	35.4	35.4	0.0	35.4
5	Unsmoothed Payment Amount (\$/MWh)	83.7	84.0	83.0	83.0	(0.0)	83.0	84.5	83.8	82.8	82.8	(0.0)	82.8	84.2	84.8	83.9	83.9	(0.0)	83.9	101.1	102.4	101.3	101.3	(0.0)	101.3	98.6	97.2	96.0	96.0	(0.0)	96.0
6	Smoothed Payment Amount <sup>1</sup>	65.8	65.8	65.8	76.4		76.4	73.1	73.1	73.1	78.6		78.6	81.1	81.1	81.1	84.8	0.0	84.8	90.0	90.0	90.0	88.2	0.0	88.2	99.9	99.9	99.9	92.0	0.0	92.0

Numbers may not add due to rounding  
1: Using WAPA method beginning with N3 Update

**OPG Recovery of Deferral and Variance Accounts and Riders**

Line No.	Description	Previously Regulated Hydroelectric Facilities				
		Amortization 2017/2018				
		OPG Proposed 5/27/2016	N1 Update 12/19/2016	N2 Update 2/17/2017	OEB Adjustment	OEB Approved
		(a)	(b)	(b)	(c)	(d)
<b>Variance Accounts (\$M)</b>						
1	Hydroelectric Water Conditions Variance	(17.3)	(17.3)	(17.3)	0.0	(17.3)
2	Ancillary Services Net Revenue Variance - Hydroelectric	(13.2)	(13.2)	(13.2)	0.0	(13.2)
3	Hydroelectric Incentive Mechanism Variance	(0.1)	(0.1)	(0.1)	0.0	(0.1)
4	Hydroelectric Surplus Baseload Generation Variance	82.5	82.5	82.5	0.0	82.5
5	Income and Other Taxes Variance - Hydroelectric	(0.0)	(0.0)	(0.0)	0.0	(0.0)
6	Capacity Refurbishment Variance - Hydroelectric	3.3	3.3	3.3	0.0	3.3
7	Pension and OPEB Cost Variance - Hydroelectric - Future	2.1	2.1	2.1	0.0	2.1
8	Pension and OPEB Cost Variance - Hydroelectric - Post 2012 Additions	11.8	11.8	11.8	0.0	11.8
9	Pension & OPEB Cash Payment Variance - Hydroelectric	4.3	4.3	4.3	0.0	4.3
10	Hydroelectric Deferral and Variance Over/Under Recovery Variance	13.5	13.5	13.5	0.0	13.5
11	<b>Total</b>	<b>86.8</b>	<b>86.8</b>	<b>86.8</b>	<b>0.0</b>	<b>86.8</b>
12	<b>2015 Actual Production (divided by 12, multiplied by 24) (TWh)</b>	<b>60.5</b>	<b>60.5</b>	<b>60.5</b>	<b>N/A</b>	<b>60.5</b>
13	<b>Rider (\$/MWh) (Line 12 / Line 13)</b>	<b>1.44</b>	<b>1.44</b>	<b>1.44</b>	<b>0.0</b>	<b>1.44</b>

Line No.	Description	Nuclear Facilities				
		Amortization 2017/2018				
		OPG Proposed 5/27/2016	N1 Update 12/19/2016	N2 Update 2/17/2017	OEB Adjustment	OEB Approved
		(a)	(b)	(b)	(c)	(d)
<b>Variance Accounts (\$M)</b>						
14	Nuclear Development Variance	1.7	1.7	1.7	0.0	1.7
15	Ancillary Services Net Revenue Variance - Nuclear	1.0	1.0	1.0	0.0	1.0
16	Capacity Refurbishment Variance - Nuclear - Capital Portion	(37.6)	(37.6)	(37.6)	0.0	(37.6)
17	Capacity Refurbishment Variance - Nuclear - Non-Capital Portion	(31.6)	(31.6)	(31.6)	0.0	(31.6)
18	Bruce Lease Net Revenues Variance - Derivative Sub-Account	(68.6)	(68.6)	(68.6)	0.0	(68.6)
19	Bruce Lease Net Revenues Variance - Non-Derivative Sub-Account - Post 2012 Additions	20.6	20.6	20.6	0.0	20.6
20	Income and Other Taxes Variance - Nuclear	(4.3)	(4.3)	(4.3)	0.0	(4.3)
21	Pension and OPEB Cost Variance - Nuclear - Future	42.9	42.9	42.9	0.0	42.9
22	Pension and OPEB Cost Variance - Nuclear - Post 2012 Additions	226.2	226.2	226.2	0.0	226.2
23	Pension & OPEB Cash Payment Variance - Nuclear	23.4	23.4	23.4	0.0	23.4
24	Nuclear Deferral and Variance Over/Under Recovery Variance	44.1	44.1	44.1	0.0	44.1
25	<b>Total</b>	<b>217.9</b>	<b>217.9</b>	<b>217.9</b>	<b>0.0</b>	<b>217.9</b>
26	<b>Forecast Production (TWh)</b>	<b>76.6</b>	<b>76.6</b>	<b>76.6</b>	<b>0.0</b>	<b>76.6</b>
27	<b>Rider (\$/MWh) (Line 28 / Line 29)</b>	<b>2.85</b>	<b>2.85</b>	<b>2.85</b>	<b>0.0</b>	<b>2.85</b>

Numbers may not add due to rounding



OPG Customer Bill Impacts

		2013-0321/2014-0370 >> EB-2016-0152						EB-2016-0152						Residential Consumers						EB-2016-0152						EB-2016-0152					
Line No.	Description	2017						2018						2019						2020						2021					
		OPG Proposed 5/27/2016	N1 Update 12/19/2016	N2 Update 2/17/2017	N3 Update 3/8/2017	OEB Adjustment	OEB Approved	OPG Proposed 5/27/2016	N1 Update 12/19/2016	N2 Update 2/17/2017	N3 Update 3/8/2017	OEB Adjustment	OEB Approved	OPG Proposed 5/27/2016	N1 Update 12/19/2016	N2 Update 2/17/2017	N3 Update 3/8/2017	OEB Adjustment	OEB Approved	OPG Proposed 5/27/2016	N1 Update 12/19/2016	N2 Update 2/17/2017	N3 Update 3/8/2017	OEB Adjustment	OEB Approved	OPG Proposed 5/27/2016	N1 Update 12/19/2016	N2 Update 2/17/2017	N3 Update 3/8/2017	OEB Adjustment	OEB Approved
		(a)	(b)	(c)	(d)	(e)		(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	(t)	(u)	(v)	(w)	(x)	(y)	(z)	(aa)	(bb)	(cc)
Production and Demand																															
1	Typical Usage, including Line Losses <sup>1</sup> (kWh/Month)	789.4	789.4	789.4	789.4	n/a	789.4	789.4	789.4	789.4	n/a	789.4	789.4	789.4	789.4	789.4	n/a	789.4	789.4	789.4	789.4	n/a	789.4	789.4	789.4	789.4	789.4	789.4	789.4	n/a	789.4
2	Forecast Production (TWh)	68.3	68.3	68.3	71.1	-	71.1	68.7	68.7	68.7	71.4	-	71.4	69.3	69.3	69.3	72.0	-	72.0	67.6	67.6	67.6	70.3	-	70.3	65.6	65.6	65.6	68.4	-	68.4
3	IESO Forecast Provincial Demand <sup>2</sup> (TWh)	137.6	137.6	137.6	137.6	n/a	137.6	137.6	137.6	137.6	137.6	n/a	137.6	137.6	137.6	137.6	137.6	n/a	137.6	137.6	137.6	137.6	n/a	137.6	137.6	137.6	137.6	137.6	n/a	137.6	
4	OPG Proportion of Consumer Usage (line 2 / line 3)	49.7%	49.7%	49.7%	51.7%	0.0%	51.7%	49.9%	49.9%	49.9%	51.9%	0.0%	51.9%	50.3%	50.3%	50.3%	52.3%	0.0%	52.3%	49.1%	49.1%	49.1%	51.1%	0.0%	51.1%	47.7%	47.7%	47.7%	49.7%	0.0%	49.7%
5	Typical Usage of OPG Generation (kWh/Month) (line 1 x line 4)	392	392	392	394	-	394	394	394	394	410	-	410	397	397	397	413	-	413	388	388	388	403	-	403	376	376	376	392	-	392
6	Typical Bill <sup>1</sup> (\$/Month)	150.58	150.58	150.58	150.58	n/a	150.58	150.58	150.58	150.58	150.58	n/a	150.58	150.58	150.58	150.58	150.58	n/a	150.58	150.58	150.58	150.58	150.58	n/a	150.58	150.58	150.58	150.58	150.58	n/a	150.58
Production-Weighted Average Rates																															
7	Prior Year weighted average rate with proposed payment amounts and riders (\$/MWh)	60.66	60.66	60.66	60.97	-	60.97	57.37	57.37	57.37	62.49	-	62.49	61.76	61.76	61.76	64.06	-	64.06	64.45	64.45	64.45	65.66	-	65.66	69.26	69.26	69.26	67.30	-	67.30
8	Current Year weighted average rate with proposed payment amounts and riders (\$/MWh)	57.37	57.37	57.37	62.49	-	62.49	61.76	61.76	61.76	64.06	-	64.06	64.45	64.45	64.45	65.66	-	65.66	69.26	69.26	69.26	67.30	-	67.30	74.27	74.27	74.27	68.98	-	68.98
Impact																															
9	Typical Bill Impact (\$/Month)	(1.29)	(1.29)	(1.29)	0.62	-	0.62	1.73	1.73	1.73	0.64	-	0.64	1.07	1.07	1.07	0.66	-	0.66	1.86	1.86	1.86	0.66	-	0.66	1.89	1.89	1.89	0.66	-	0.66
10	Percentage Change of Typical Bill (line 9 / line 6)	-0.9%	-0.9%	-0.9%	0.4%	0.0%	0.4%	1.1%	1.1%	1.1%	0.4%	0.0%	0.4%	0.7%	0.7%	0.7%	0.4%	0.0%	0.4%	1.2%	1.2%	1.2%	0.4%	0.0%	0.4%	1.3%	1.3%	1.3%	0.4%	0.0%	0.4%

		2013-0321/2014-0370					
		Current Rates					
Line No.	Description	2017					
		OPG Proposed 5/27/2016	N1 Update 12/19/2016	N2 Update 2/17/2017	N3 Update 3/8/2017	OEB Adjustment	OEB Approved
		(a)	(b)	(c)	(d)	(e)	
Payment Amounts (\$/MWh)							
11	Regulated Hydroelectric	40.72	40.72	40.72	40.72	n/a	40.72
12	Nuclear	59.29	59.29	59.29	59.29	n/a	59.29
Riders (\$/MWh)							
13	Regulated Hydroelectric	3.83	3.83	3.83	3.83	n/a	3.83
14	Nuclear	13.01	13.01	13.01	13.01	n/a	13.01
Total Annual Rates (\$/MWh)							
15	Regulated Hydroelectric	44.55	44.55	44.55	44.55	n/a	44.55
16	Nuclear	72.30	72.30	72.30	72.30	n/a	72.30
Forecast Production EB-2016-0152 (TWh)							
17	Regulated Hydroelectric	33.8	33.8	33.8	33.0	n/a	32.98
18	Nuclear	46.8	46.8	46.8	47.8	n/a	47.8
19	Total	80.6	80.6	80.6	80.8	0.1	80.8
Production-Weighted Average Rates (\$/MWh)							
20	Regulated Hydroelectric	16.69	16.69	16.69	16.19	n/a	16.19
21	Nuclear	41.97	41.97	41.97	42.78	-	42.78
22	Total (line 20 + line 21)	60.66	60.66	60.66	60.97	-	60.97
23	Total Production-Weighted Average Rate (\$/MWh)	60.66	60.66	60.66	60.97	-	60.97

		EB-2016-0152 Proposed Rates						EB-2016-0152 Proposed Rates						EB-2016-0152 Proposed Rates						EB-2016-0152 Proposed Rates											
Line No.	Description	2017						2018						2019						2020						2021					
		OPG Proposed 5/27/2016	N1 Update 12/19/2016	N2 Update 2/17/2017	N3 Update 3/8/2017	OEB Adjustment	OEB Approved	OPG Proposed 5/27/2016	N1 Update 12/19/2016	N2 Update 2/17/2017	N3 Update 3/8/2017	OEB Adjustment	OEB Approved	OPG Proposed 5/27/2016	N1 Update 12/19/2016	N2 Update 2/17/2017	N3 Update 3/8/2017	OEB Adjustment	OEB Approved	OPG Proposed 5/27/2016	N1 Update 12/19/2016	N2 Update 2/17/2017	N3 Update 3/8/2017	OEB Adjustment	OEB Approved	OPG Proposed 5/27/2016	N1 Update 12/19/2016	N2 Update 2/17/2017	N3 Update 3/8/2017	OEB Adjustment	OEB Approved
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	(t)	(u)	(v)	(w)	(x)	(y)	(z)	(aa)	(ab)	(ac)	
Payment Amounts (\$/MWh)																															
24	Regulated Hydroelectric	41.71	41.71	41.71	41.71	-	41.71	42.33	42.33	42.33	42.33	-	42.33	42.97	42.97	42.97	42.97	-	42.97	43.61	43.61	43.61	43.61	-	43.61	44.27	44.27	44.27	44.27	-	44.27
25	Nuclear	65.81	65.81	65.81	76.39	-	76.39	73.05	73.05	73.05	76.60	-	76.60	81.09	81.09	81.09	84.83	-	84.83	90.01	90.01	90.01	88.21	-	88.21	99.91	99.91	99.91	92.02	-	92.02
Riders (\$/MWh)																															
26	Regulated Hydroelectric	1.44	1.44	1.44	1.44	-	1.44	1.44	1.44	1.44	1.44	-	1.44																		
27	Nuclear	2.85	2.85	2.85	2.85	-	2.85	2.85	2.85	2.85	2.85	-	2.85																		
Total Annual Rates (\$/MWh)																															
28	Regulated Hydroelectric	43.14	43.14	43.14	43.14	-	43.14	43.77	43.77	43.77	43.77	-	43.77	42.97	42.97	42.97	42.97	-	42.97	43.61	43.61	43.61	43.61	-	43.61	44.27	44.27	44.27	44.27	-	44.27
29	Nuclear	68.66	68.66	68.66	79.24	-	79.24	75.90	75.90	75.90	81.45	-	81.45	81.09	81.09	81.09	84.83	-	84.83	90.01	90.01	90.01	88.21	-	88.21	99.91	99.91	99.91	92.02	-	92.02
Forecast Production EB-2016-0152 (TWh)																															
30	Regulated Hydroelectric	30.2	30.2	30.2	33.0	n/a	32.98	30.2	30.2	30.2	33.0	n/a	32.98	30.2	30.2	30.2	33.0	n/a	32.98	30.2	30.2	30.2	33.0	n/a	32.98	30.2	30.2	30.2	33.0	n/a	32.98
31	Nuclear	38.1	38.1	38.1	38.1	-	38.1	38.5	38.5	38.5	38.5	-	38.5	39.0	39.0	39.0	39.0	-	39.0	37.4	37.4	37.4	37.4	-	37.4	35.4	35.4	35.4	35.4	-	35.4
32	Total	68.3	68.3	68.3	71.1	-	71.1	68.7	68.7	68.7	71.4	-	71.4	69.3	69.3	69.3	72.0	-	72.0	67.6	67.6	67.6	70.3	-	70.3	65.6	65.6	65.6	68.4	0	68.4
Production-Weighted Average Rates (\$/MWh)																															
33	Regulated Hydroelectric	19.09	19.09	19.09	20.02	n/a	20.02	19.26	19.26	19.26	20.20	n/a	20.20	18.75	18.75	18.75	19.68	n/a	19.68	19.51	19.51	19.51	20.45	n/a	20.45	20.39	20.39	20.39	21.35	n/a	21.35
34	Nuclear	38.28	38.28	38.28	42.47	-	42.47	42.50	42.50	42.50	43.85	-	43.85	45.70	45.70	45.70	45.98	-	45.98	49.75	49.75	49.75	46.85	-	46.85	53.88	53.88	53.88	47.63	-	47.63
35	Total (line 20 + line 21)	57.37	57.37	57.37	62.49	-	62.49	61.76	61.76	61.76	64.06	-	64.06	64.45	64.45	64.45	65.66	-	65.66	69.26	69.26	69.26	67.30	-	67.30	74.27	74.27	74.27	68.98	-	68.98
36	Total Production-Weighted Average Rate (\$/MWh)	57.37	57.37	57.37	62.49	-	62.49	61.76	61.76	61.76	64.06	-	64.06	64.45	64.45	64.45	65.66	-	65.66	69.26	69.26	69.26	67.30	-	67.30	74.27	74.27	74.27	68.98	-	68.98