

OPG  
EB-2016-0152  
OEB Staff Compendium  
Panel 6

1 **THIRD IMPACT STATEMENT**

2  
3  
4 **1.0 PURPOSE**

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

12  
13 Consistent with the previously filed Impact Statements (Ex. N1-1-1 and Ex. N2-1-1), OPG  
14 has consolidated the relevant updates to its evidence in this exhibit.

15  
16 **2.0 OVERVIEW OF REVISED RATE SMOOTHING PROPOSAL**

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

27  

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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.

28  

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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.

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 **4.0 RATE SMOOTHING CONSIDERATIONS**

5

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

9 FINANCIAL PERFORMANCE

10 1. Financial Viability

11 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

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.

1  
 2 OPG’s proposal results in deferring the collection of approximately \$1B in revenue in the  
 3 2017 to 2021 period, as reflected in Chart 4 below. This is approximately \$0.4B less than  
 4 OPG proposed to defer under the previous proposal (after adjustments to account for the  
 5 reduced nuclear revenue requirement in the previous impact statements). The nuclear  
 6 payment amounts have been updated based on the level of deferred recovery associated  
 7 with this proposal.

8  
 9 **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

10  
 11  
 12 **7.0 IMPLEMENTATION**

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

19  
 20 Nuclear rate smoothing is unique in terms of the magnitude of the proposed deferred  
 21 amounts, and the number of interrelated decisions required. To the extent the OEB’s  
 22 decision changes the rate smoothing inputs, it may be expedient for the OEB to make a  
 23 decision on the nuclear revenue requirements and the inputs (steps 2 and 3 of the chart in  
 24 section 3.1 above), and withhold its final decision on the “outputs” (i.e., the annual change in  
 25 WAPA, the resulting nuclear payment amount, and the amount to be deferred in the RSDA)  
 26 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:

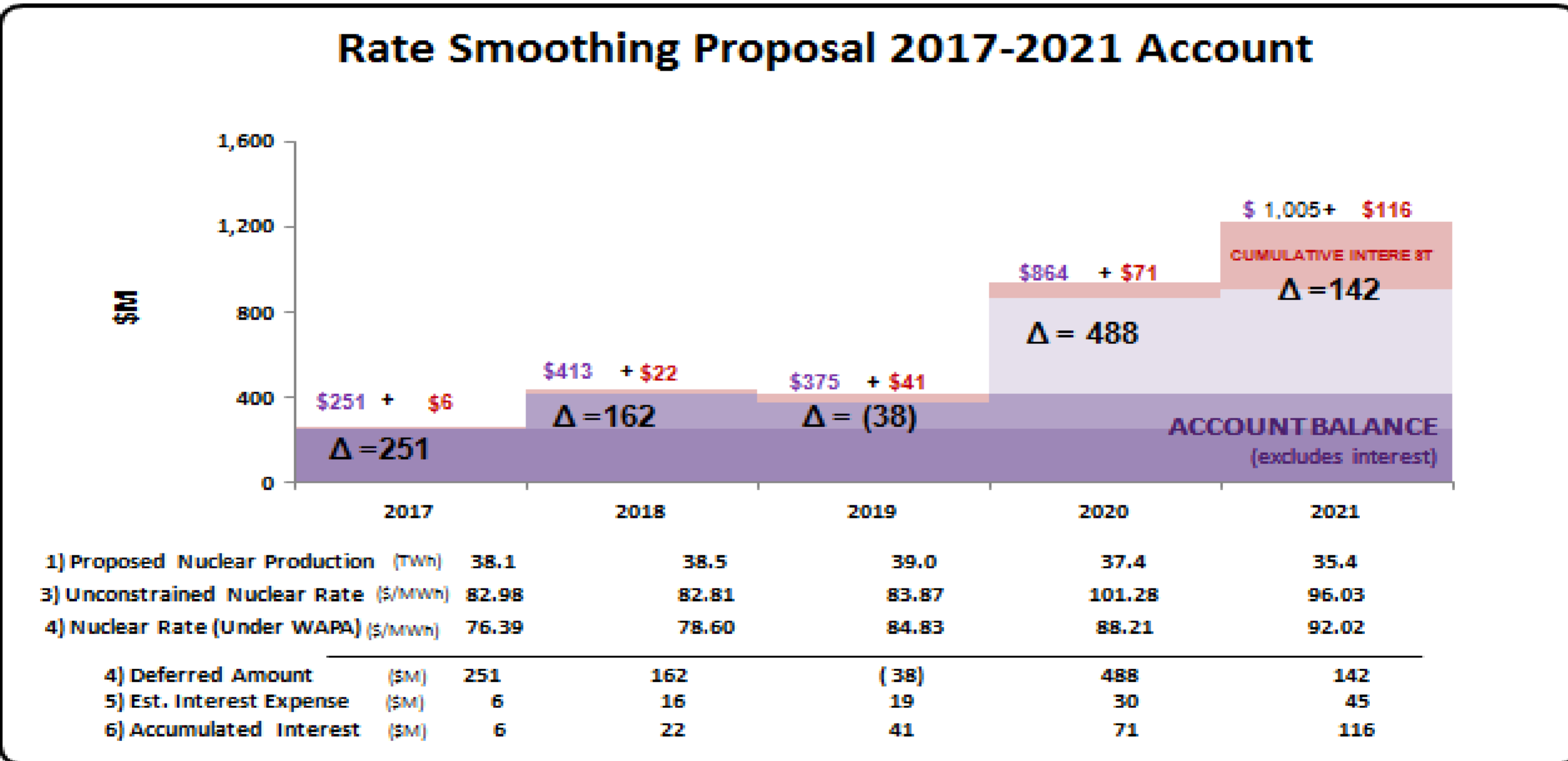
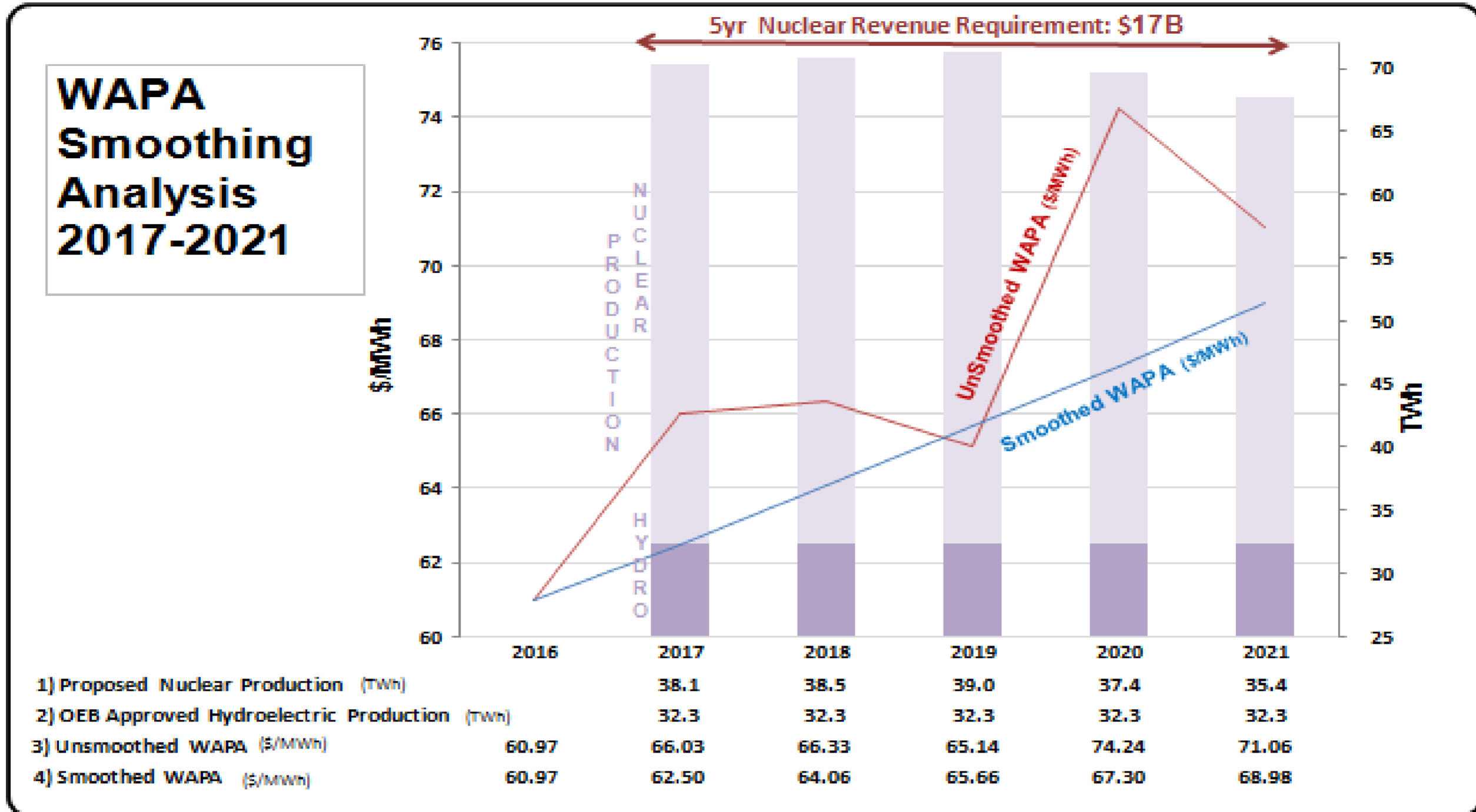
- 10 • **Table 1:** Annualized Residential Consumer Impact (updated Ex. I1-1-2 Table 1)
- 11 • **Table 2:** Computation of Percent Change in Payment Amounts (updated Ex. I1-1-2  
12 Table 2)
- 13 • **Table 3:** Payment Amounts and Riders – Nuclear (updated Ex. I1-3-1 Table 1)

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.





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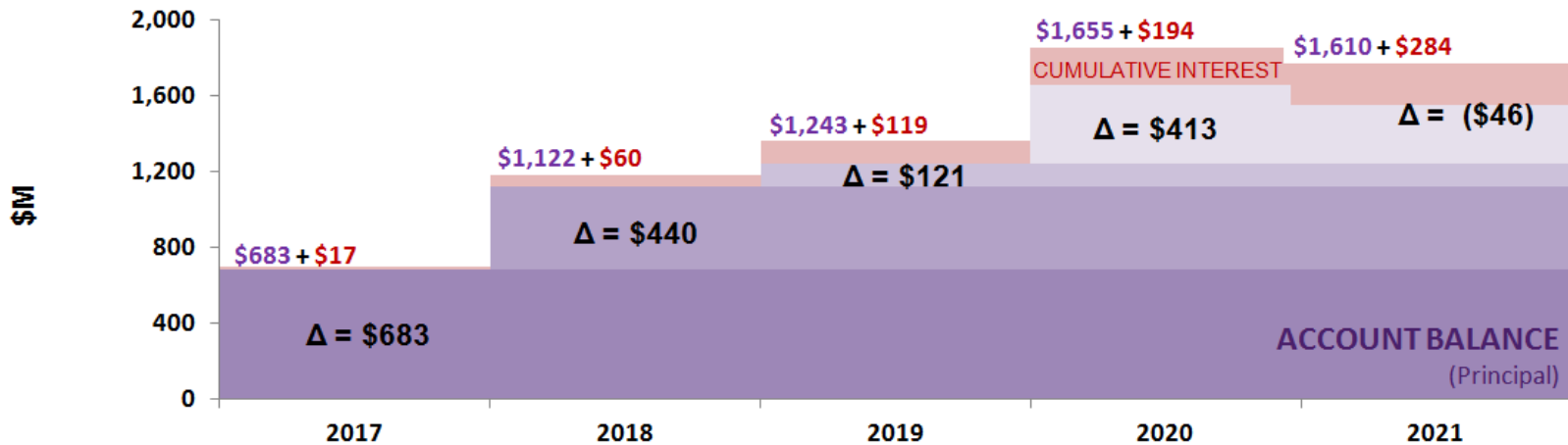
## Nuclear Rate Smoothing

*Untranscribed Technical Conference  
September 23, 2016*

Chris Fralick  
*Vice President, Regulatory Affairs*  
Randy Pugh  
*Director, Regulatory Affairs*

# Mechanics of OPG's Rate Smoothing Proposal

## Rate Smoothing Deferral Account 2017-2021



1) Proposed Production (TWh)	38.1	38.5	39.0	37.4	35.4
2) Unsmoothed Rates (\$/MWh)	83.73	84.48	84.17	101.05	98.62
3) Smoothed Rate (\$/MWh)	65.81	73.05	81.09	90.01	99.91
4) Annual Deferred Amt (\$M)	683	440	121	413	(46)
5) Cumulative Deferred Amt (\$M)	683	1,122	1,243	1,655	1,610
6) Est. Interest Expense (\$M)	17	43	59	75	90
7) Est. Cumulative Interest (\$M)	17	60	119	194	284

recovered on a straight line basis over a period not to exceed three years, to the extent that the Board is satisfied that 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.



**Ontario Energy Board**  
**Commission de l'énergie de l'Ontario**

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**Handbook  
for  
Utility Rate Applications**

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**October 13, 2016**

costs through conservation, and better understand the value of distribution services. It is also a fairer way to recover the costs of providing electricity distribution service.<sup>26</sup>

### Rate Mitigation

The OEB expects utilities to mitigate bill impacts through the pacing and prioritizing of investments and activities. For electricity distributors, the OEB has a policy requiring the filing of a mitigation plan when the total bill impact is 10% or more for any customer class. The OEB expects all other utilities to propose mitigation plans, or explain why a plan is not required, when their proposals result in material impacts to customers<sup>27</sup>.

### Rate-setting Policies for Consolidations

On March 26, 2015 the OEB issued its *Report of the Board: Rate-Making Associated with Distributor Consolidation*. To encourage consolidations, the OEB established a policy that consolidating entities could defer rebasing for up to 10 years. For electricity distributors deferring rebasing beyond five years, an earnings sharing mechanism (ESM) is required above  $\pm 300$  basis points. The ESM is designed to protect customers and ensure that they share in any increased benefits from consolidation during the deferred rebasing period.

Under the ESM, excess earnings are shared with consumers on a 50:50 basis for all earnings that are more than 300 basis points above the consolidated entity's annual ROE. Earnings will be assessed each year once audited financial results are available and excess earnings beyond 300 basis points will be shared with customers annually. No evidence is required in support of an ESM that follows the form set out in the OEB's reports.

To encourage consolidation, the OEB also extended the availability of the ICM for consolidating distributors that are on Annual IR Index, thereby providing consolidating distributors with the ability to finance capital investments during the deferral period without being required to rebase earlier than planned.

On January 19, 2016 the OEB issued the *Handbook to Electricity Distributor and Transmitter Consolidations* (the MAADs Handbook). The MAADs Handbook provides

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<sup>26</sup> *Board Policy: A New Distribution Rate Design for Residential Electricity Customers*, April 2, 2015.

<sup>27</sup> The OEB's August 14, 2014 *Decision* on the quarterly rate adjustment mechanism process for natural gas distributors (EB-2014-0199), determined that advance notification to customers would be required going forward and a mitigation plan must be filed if a 25% or greater change is anticipated on the commodity portion of a typical residential system supply customer's bill.



## OPG EB-2016-0152 - Rate Smoothing

### As proposed by OPG

<b>Exh N3 - Mar 8, 2017</b>		<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>Ave/Total</b>
1	Hydroelectric Payment Amount (\$/MWh)	40.72	41.71	42.33	42.97	43.61	44.27	
2	Hydroelectric Rider (\$/MWh)	3.83	1.44	1.44				
3	Hydroelectric Production (TWh)	33.0	33.0	33.0	33.0	33.0	33.0	
4	Nuclear Revenue Requirement (\$M)		3161.4	3185.7	3273.2	3783.5	3397.8	
5	Nuclear Production Forecast (TWh)	46.80	38.10	38.47	39.03	37.36	35.38	
6	Unsmoothed Nuclear Payment Amount (\$/MWh)	59.29	82.98	82.81	83.86	101.27	96.04	
7	Smoothed Nuclear Payment Amount (\$/MWh)	59.29	76.39	78.60	84.83	88.21	92.02	
8	%Change in Smoothed Nuclear Payments		29%	3%	8%	4%	4%	
9	Nuclear Rider (\$/MWh)	13.01	2.85	2.85				
10	WAPA (lines 1,2,3,5,7,9) (\$/MWh)	60.97	62.49	64.06	65.66	67.30	68.98	
11	Deferred Amount (\$M)		251	162	-38	488	142	1005
12	Carrying Charges (\$M)		6	16	19	30	45	116
13	Total Bill Impact (\$/month)		0.62	0.64	0.66	0.66	0.66	0.65

Source: RRWF, lines 11-12 Exh N3-11.6-1 Attachment 2 Table 18, WAPA formula as per O. Reg. 53/05

### No Smoothing (as calculated by OEB staff)

<b>Exh N3 - Unsmoothed Scenario</b>		<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>Ave/Total</b>
14	Hydroelectric Payment Amount (\$/MWh)	40.72	41.71	42.33	42.97	43.61	44.27	
15	Hydroelectric Rider (\$/MWh)	3.83	1.44	1.44				
16	Hydroelectric Production (TWh)	33.0	33.0	33.0	33.0	33.0	33.0	
17	Nuclear Revenue Requirement (\$M)		3161.4	3185.7	3273.2	3783.5	3397.8	
18	Nuclear Production Forecast (TWh)	46.80	38.10	38.47	39.03	37.36	35.38	
19	Unsmoothed Nuclear Payment Amount (\$/MWh)	59.29	82.98	82.81	83.86	101.27	96.04	
20	Smoothed Nuclear Payment Amount (\$/MWh)	59.29	82.98	82.81	83.86	101.27	96.04	
21	%Change in Smoothed Nuclear Payments		40%	0%	1%	21%	-5%	
22	Nuclear Rider (\$/MWh)	13.01	2.85	2.85				
23	WAPA (lines 14,15,16,18,20,22) (\$/MWh)	60.97	66.03	66.33	65.14	74.24	71.06	
24	Deferred Amount (\$M)		0	0	0	0	0	0
25	Carrying Charges (\$M)		0	0	0	0	0	0
26	Total Bill Impact (\$/month)		2.06	0.13	-0.49	3.67	-1.25	0.82

Lines 14-19 from table above, Lines 20-26 calculated by OEB staff, WAPA formula as per O. Reg. 53/05



## Ontario's Fair Hydro Plan

Find out how much you will save on your monthly electricity bill, and learn more about programs and tax credits to help lower your bill.

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### What's new

**Starting this summer, electricity bills will be reduced by 25% on average for households across Ontario. Many small businesses and farms will also benefit from this cut.**

And bills won't increase beyond the rate of inflation for at least four years.

People who live in eligible rural communities and those with low incomes will see even more reductions to their electricity bills.

Taken together, these changes will deliver the single-largest reduction to electricity rates in Ontario's history.

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### Get more discounts on your bill

[Ontario Electricity Support Program \(OESP\) \(https://ontarioelectricitysupport.ca/?lang=en/\)](https://ontarioelectricitysupport.ca/?lang=en/)

Now available to even more low income, electricity consumers, **[apply online \(https://ontarioelectricitysupport.ca/SelfAssessment\)](https://ontarioelectricitysupport.ca/SelfAssessment)** and you could receive \$360-\$425 off per year on your bills, through the [OESP](#).

If you have other unique electricity requirements, including electric heating, a medical device that uses a lot of electricity or you're a First Nation, Inuit or Métis customer, you could receive an extra \$45-\$75 off per year on your bills.

### Affordability Fund

This fund will help eligible customers who don't qualify for existing, low income electricity programs.

It will also help low income customers pay for energy-efficiency improvements in their homes, which will help reduce electricity bills.

Details about the fund and information on how to apply will be communicated to eligible customers in the coming months.

### First Nations On-Reserve Delivery Credit

We are removing the delivery charge for all on-reserve First Nations residential customers, who will automatically receive the credit on their electricity bills.

The credit is a result of a partnership between the Ontario Energy Board, First Nations, including remote communities, distributors and consumer groups such as the [Low Income Energy Network \(http://www.lowincomeenergy.ca/\)](http://www.lowincomeenergy.ca/).