NUCLEAR RATE SMOOTHING AND MID-TERM PRODUCTION REVIEW

1.0 PURPOSE

This evidence sets out OPG’s proposals for smoothing nuclear payment amounts during the 2017 to 2021 test period, and for a mid-term review of the nuclear production forecast for the second half of the test period.

2.0 NUCLEAR RATE SMOOTHING

2.1 Overview

OPG proposes that annual nuclear base payment amounts reflect a constant 11 per cent per year rate increase during the 2017 to 2021 test period (the “smoothed rate”). OPG further proposes that a deferral account be established to record the difference between the total annual nuclear revenue requirement approved by the OEB starting in 2017 and the portion of that revenue requirement each year that produces the proposed annual 11 per cent payment amount increase when combined with the OEB approved nuclear production forecast for the corresponding year.

OPG’s proposal is intended to mitigate rate impact and volatility beginning January 1, 2017 and ending when the Darlington Refurbishment Program ends (the “deferral period” as defined in O. Reg. 53/05, s. 0.1 (1)). The rate impact and volatility in the test period are driven by reduced production as Darlington units are taken out of service to be refurbished, partially offset by production at the Pickering generating station in 2021 due to the plan to extend operations, and costs associated with the Darlington Refurbishment Program (“DRP”). OPG’s proposal is consistent with the amendments to O. Reg. 53/05 (the “regulation”), which came into force as of January 1, 2016 and are filed as Ex. A1-6-1, Attachment 1.
OPG proposes an 11 per cent annual smoothed rate increase for the 2017 to 2021 period, which would result in a cumulative deferred revenue requirement of approximately $1.6B\(^1\) based on OPG’s proposed revenue requirement, including reductions from the nuclear stretch factor adjustment.\(^2\) This proposed rate increase would result in stable payment amount increases during the first five years of the deferral period, while supporting adequate levels for OPG’s credit metrics.

The average residential customer bill impact of OPG’s rate proposals is slightly less than 0.7 per cent annually or approximately $1.05 on a typical monthly residential customer bill each year. If OPG were to propose a constant nuclear base rate increase that recovered the entire proposed nuclear revenue requirement for the 2017 to 2021 period, that rate increase would be approximately 15 per cent per year, and the customer bill impact would be over 1.2 per cent annually or approximately $1.85 on a typical monthly residential customer bill each year.

### 2.2 Requirements of O. Reg. 53/05

Ontario Regulation 53/05 sets out certain processes and parameters that OPG and the OEB must follow regarding the smoothing of OPG’s nuclear payment amounts during the deferral period.\(^3\)

The regulation requires that, for each year of the deferral period, the OEB must approve a nuclear revenue requirement and must also determine a portion of that approved revenue requirement to defer.\(^4\) The OEB is required to make this decision with the aim of stabilizing year-over-year changes in payment amounts.\(^5\) Ontario Regulation 53/05 confirms that rate smoothing applies when determining the amount of revenue requirement to defer and that the OEB’s approval of OPG’s nuclear revenue requirement is not restricted by rate smoothing.\(^6\)

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\(^1\) Annual deferred amounts provided in Chart 4. The deferred amount excludes interest of approximately $0.28B based on OPG’s annual long-term debt rates discussed in Ex. C1-1-2.

\(^2\) Ex. N1-1-1 Table 1, line 27.

\(^3\) O. Reg. 53/05 defines the deferral period which commences January 1, 2017 and ends when the Darlington Refurbishment Project ends.

\(^4\) O. Reg. 53/05, s. 5.5 (1).

\(^5\) O. Reg. 53/05, s. 6 (2), sub-para. 12 (i).

\(^6\) O. Reg. 53/05, s. 6 (2), sub-para. 12 (iii).
Pursuant to the regulation, OPG is required to establish a rate smoothing deferral account ("RSDA") to record the difference between:

A. the total OEB-approved revenue requirement for the nuclear facilities for each year in the deferral period, and
B. the portion of the revenue requirement in (A) that is used in connection with setting payment amounts for that year.\(^7\)

Ontario Regulation 53/05 also requires OPG to record interest on the balance of the RSDA at the OEB approved long-term-debt rate for OPG, compounded annually.\(^8\)

Ontario Regulation 53/05 also states that the OEB must approve both the annual nuclear revenue requirements and the amount of the approved revenue requirement to be deferred on a five year basis for the first ten years of the deferral period, and then periodically as determined by the OEB.\(^9\) The OEB must also ensure that OPG recovers the balance recorded in the deferral account on a straight line basis over a period not to exceed ten years, beginning at the end of the deferral period (the "recovery period").\(^10\)

2.3 Rate Smoothing Considerations

While O. Reg. 53/05 establishes certain processes and parameters governing the establishment of smoothed nuclear payment amounts, the OEB is required to apply its judgement in order to set a smoothed rate that is just and reasonable. In developing its rate smoothing proposal, OPG considered the objectives of the OEB and the Renewed Regulatory Framework for Electricity Distributors ("RRFE") performance outcomes.\(^11\) With these factors in mind, OPG developed a set of considerations that informed its rate smoothing proposal.

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\(^7\) O. Reg. 53/05, s. 5.5 (1).
\(^8\) O. Reg. 53/05, s. 5.5 (2).
\(^9\) O. Reg. 53/05, s. 6 (2), para. 12 (ii).
\(^10\) O. Reg. 53/05, s. 6 (2), para. 12 (iv)
\(^11\) 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.
FINANCIAL PERFORMANCE

1) Financial Viability (Leverage and Cash Flow Impacts): This criterion focuses on maintaining levels for the company’s credit metrics that are adequate to support an investment grade credit rating, and ensuring sufficient cash flow to support the company’s debt and interest obligations. As discussed in Ex. C1-1-2, OPG forecasts issuing $4B in long-term debt over the 2017 to 2021 period. An investment grade credit rating is critical to OPG’s ability to obtain cost effective financing.

OPG used two financial metrics to gauge the potential impact of rate smoothing alternatives on the above objectives: Debt-to-Earnings Before Interest Taxes Depreciation and Amortization (“EBITDA”) ratio and the Funds from Operations ("FFO") Adjusted Interest Coverage ratio. The Debt-to EBITDA ratio is used by Standard and Poor’s as a measure of financial risk. A forecast Debt-to-EBITDA ratio of greater than 5.5 indicates a high level of financial risk, which could lead to a credit rating downgrade. The FFO Adjusted Interest Coverage ratio is reported in OPG’s external financial filings (i.e., Management Discussion and Analysis) as an indicator of OPG’s ability to support the level of debt by meeting interest obligations from operating cash flows. OPG’s target threshold for this ratio is a minimum of three times. OPG’s rate smoothing proposal reflects the company’s best attempt to stay within the above thresholds while taking into account the other considerations.

CUSTOMER FOCUS

2) Rate Stability: Ontario Regulation 53/05 provides that the OEB’s rate-smoothing decisions should be made “with a view to making more stable the year-over-year changes in the payment amount.”12 In an environment of escalating revenue requirements and decreasing production, stability implies a constant rate change each year of the deferral period. Stability during the RSDA recovery period13 would be similarly achieved using the same rate change each year. For customers, stability would allow them to better predict the impact of OPG generation on their electricity

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12 O. Reg. 53/05 Section 12(i)
13 O. Reg. 53/05 requires recovery over a period not to exceed ten years, beginning at the end of the deferral period. OPG assumes a 10 year period given the magnitude of the peak account balance
bills. For OPG, stable rate changes would improve the predictability of cash flows at a
time when the DRP and the end of commercial operations at the Pickering station are
expected to reduce production while drawing on OPG’s financial resources. OPG’s
proposal reflects a constant rate change during the first five years of the deferral
period and was developed by considering rate impacts over the full deferral and
recovery periods, as discussed below.

3) Long-term Perspective: As a substantial portion of the revenue requirement will be
deferred for future collection, the rates set in one period will necessarily affect rates to
be established in the future. These future rate effects should be considered when
setting rates for the test period, in order to avoid creating abrupt rate swings in the
future. Rates should be reasonable considering the entire cost deferral and recovery
cycle. For example, a smoothed rate that is too low during the deferral period will
result in large rate increases during the recovery period. The opposite it also true.

4) Post-Recovery Transition: A rate smoothing proposal should attempt to minimize rate
transition issues on completion of RSDA recovery. OPG’s costs and production are
expected to be in a steady state on completion of the smoothing account recovery
period (i.e., the “new normal”). The average forecast unsmoothed rate (i.e., the rate
excluding any rate smoothing recoveries) from 2032 to 2036 is approximately
$120/MWh (discussed in section 2.4). Ideally, the smoothed rate at the end of the
recovery period should not differ substantially from the steady state rate. This would
avoid abrupt rate changes following the end of the recovery period.

5) Intergenerational Equity: The fundamental concept of smoothing is that costs incurred
in one period are deferred for recovery in a future period. Ontario Regulation 53/05
supports this treatment, and provides that costs deferred for recovery will earn OPG’s
long-term debt interest rate compounded annually as determined by the OEB. The
smoothed rate should balance the customer bill impacts of deferred recovery with the
carrying costs that will ultimately be borne by customers in subsequent periods as a
result of that deferral.
6) Customer Bill Impact: The four Customer Focus considerations discussed above all affect the short-term and long-term impact on customer bills. The magnitude of the customer bill impact over the full deferral and recovery period should be reasonable in the circumstances.

2.4 Rate Smoothing Alternatives

Ontario Regulation 53/05 requires the OEB to set smoothed annual payment amounts by deferring specific amounts of approved nuclear revenue requirement. In this application the OEB is setting a smoothing rate for the 2017 to 2021 period, and revenue requirement and production information for this period is required to do so. The amount of revenue requirement to be deferred each year is the net amount resulting from OEB decisions on the annual nuclear production forecasts, annual nuclear revenue requirements, and the rate of annual increase in nuclear base payment amounts. The revenue requirement and production forecasts\(^\text{14}\) proposed in this application are summarized in Chart 1. Rate smoothing alternatives are provided at the end of this section.

![Chart 1](image)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
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<tbody>
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<td></td>
<td>3,202</td>
<td>3,223</td>
<td>3,310</td>
<td>3,824</td>
<td>3,438</td>
</tr>
<tr>
<td>Forecast Production (TWh)</td>
<td>38.10</td>
<td>38.47</td>
<td>39.03</td>
<td>37.36</td>
<td>35.38</td>
</tr>
</tbody>
</table>

Ontario Regulation 53/05 requires the OEB to authorize recovery of the balance in the RSDA over a period not to exceed ten years.\(^\text{15}\) As the magnitude of the costs being deferred is in the billions of dollars, OPG’s smoothing proposal assumes RSDA recovery over the maximum ten year period.

Since rates set for the 2017 to 2021 period will necessarily have implications for the rates set later in the deferral and recovery periods, an understanding of forecast nuclear costs and

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\(^{14}\) Production forecast details for Darlington and Pickering are provided in Ex E2-1-1 Table 1. Revenue Requirement values are net of stretch factor reductions, as presented in Ex. II-3-1 Table 1.

\(^{15}\) O. Reg. 53/05 section 6 (2), subparagraph 12 (iii).
production for the entire deferral and recovery period is necessary context for the rate smoothing proposal. While it is not possible to forecast revenue requirement and production out 20 years with a high degree of accuracy, below OPG provides its current view of the approximate longer-term revenue requirement and production forecasts, along with indicative average rates that would result for the 2021-2036 period absent rate smoothing.

Chart 2

Five-Year Revenue Requirement, Production and Average Rate (Absent Rate Smoothing)

<table>
<thead>
<tr>
<th></th>
<th>2017-2021</th>
<th>2022-2026</th>
<th>2027-2031</th>
<th>2032-2036</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anticipated Revenue Requirement ($BN)</td>
<td>$ 17.0</td>
<td>$ 18.1</td>
<td>$ 18.2</td>
<td>$ 17.1</td>
</tr>
<tr>
<td>Anticipated Production (TWh)</td>
<td>188</td>
<td>130</td>
<td>136</td>
<td>141</td>
</tr>
<tr>
<td>Average Rate ($/MWh)</td>
<td>$ 90</td>
<td>$ 139</td>
<td>$ 135</td>
<td>$ 121</td>
</tr>
</tbody>
</table>

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 rate is a reasonable proxy for the rate that will prevail after the cost deferral and recovery cycle (i.e., the “new normal”). To minimize the impact of transitioning to non-smoothed rates after the RSDA is recovered over the assumed ten year period, the final rate in the recovery period should be similar to the post-transition rate (i.e., approximately $120/MWh forecast above).

The following chart provides a summary of the outcomes from a range of rate smoothing alternatives. The alternatives reflect a constant annual rate increase for the ten year deferral period during which the DRP is forecast to be completed, and the resulting constant annual rate change required to recover amounts deferred and carrying costs over the following ten year recovery period. For each alternative, OPG has provided the approximate peak RSDA account balance, an estimate of the total interest accumulated in the RSDA to the end of the recovery period, projected credit metrics during the deferral period, the rate change both in $/MWh and percentage terms on transition to the steady state rate following the recovery
period (i.e., approximately $120/MWh), and an estimated average monthly customer bill impact over the full deferral and recovery periods.

Chart 3
Smoothing Alternatives – Outcomes

<table>
<thead>
<tr>
<th></th>
<th>2017 - 2021 Rate Increase</th>
<th>2022- 2026 Rate Increase</th>
<th>2027 - 2035 Rate Increase</th>
<th>Peak Account Balance ($)</th>
<th>2017 - 2036 Total Interest ($)</th>
<th>Interest Cost / Deferred Revenues Ratio</th>
<th>FFO Interest Coverage ( \geq 3^* ) (2017-2021) / (2022-2026)</th>
<th>DEBT to EBITDA ( \leq 5.5^* ) (2017-2021) / (2022-2026)</th>
<th>Transition Impact: 2037 Rate Change ($/MWh / %)</th>
<th>Average Bill Impact: 2017-2036 (%)</th>
<th>Average Bill Impact: 2017-2036 ($ / month)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017 - 2021 Rate Increase</td>
<td>12.0%</td>
<td>11.0%</td>
<td>10.0%</td>
<td>9.0%</td>
<td>8.0%</td>
<td>0.2</td>
<td>3.7 / 6.3</td>
<td>6.1 / 5.1</td>
<td>$26/MWh / 27%</td>
<td>0.2%</td>
<td>$0.24</td>
</tr>
<tr>
<td>2022- 2026 Rate Increase</td>
<td>12.0%</td>
<td>11.0%</td>
<td>10.0%</td>
<td>9.0%</td>
<td>8.0%</td>
<td>0.5</td>
<td>3.6 / 5.3</td>
<td>6.2 / 5.3</td>
<td>$2/MWh / 2%</td>
<td>0.3%</td>
<td>$0.42</td>
</tr>
<tr>
<td>2027 - 2035 Rate Increase</td>
<td>(6.4)%</td>
<td>(3.4)%</td>
<td>(0.3)%</td>
<td>2.6%</td>
<td>5.4%</td>
<td>0.8</td>
<td>3.5 / 4.5</td>
<td>6.3 / 5.5</td>
<td>$(28)/MWh / (19%)</td>
<td>0.4%</td>
<td>$0.65</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$6.9</td>
<td>0.9</td>
<td>3.5 / 3.9</td>
<td>6.3 / 5.7</td>
<td>$(60)/MWh / (33%)</td>
<td>0.6%</td>
<td>$0.90</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$9.5</td>
<td>0.9</td>
<td>3.4 / 3.3</td>
<td>6.4 / 6.0</td>
<td>$(95)/MWh / (44%)</td>
<td>0.8%</td>
<td>$1.16</td>
</tr>
</tbody>
</table>

*Weakest Ratio

2.5 Application of the Criteria and OPG’s Proposal

Based on its assessment of the alternatives above, using the considerations described in section 2.3, OPG proposes an 11 per cent annual nuclear base rate increase for the 2017 to 2021 period. A discussion of the rationale OPG applied to evaluate each option for each of the assessment considerations\(^{16}\) is provided below.

\(^{16}\) Rate Stability is not included as a specific consideration for assessing the relative merits of the five alternatives as all five alternatives reflect a constant rate change each year in both the deferral and recovery periods.
i. Financial Viability (Leverage and Cash Flow Impacts): Higher values for the FFO Adjusted Interest Coverage ratio and lower values for the Debt to EBITDA credit metric reduce financial risk to OPG. OPG applied “financial viability” as a threshold criterion to identify the range of potentially acceptable rate smoothing alternatives shown in Chart 3. OPG assessment was based on at least one of the two metrics cited above being within threshold at all times during each of the two 5-year deferral periods (i.e., 2017 to 2021 and 2022 to 2026).

ii. Long-Term Perspective: The assessment was based on the size of the average change in rates during the recovery period (closer to 0 per cent is better).

iii. Post-Recovery Transition: The assessment was based on the size of the change in rates at the end of the recovery period (smaller is better) to the forecast steady state rate of approximately $120/MWh.

iv. Intergenerational Equity: The assessment was based on the ratio of total interest costs to total amounts deferred (total interest / total amounts deferred). The lower the ratio, the lower the cost of deferring revenue under that alternative. Intergenerational equity involves striking a balance between the benefits of deferring revenue and the costs of the deferral; therefore OPG’s assessment placed value on a ratio that best reflects this balance (i.e., neither the highest nor the lowest ratio).

v. Customer Bill Impact: The assessment was based on average customer monthly bill impacts for the entire deferral and recovery period. Consistent with the Rate Stability criterion, the impact was determined using a constant rate increase during the deferral period (i.e., both 2017 to 2021 and 2022 to 2026) and a constant rate change during the recovery period (2027 to 2036) as identified in Chart 3. Lower customer bill impacts are better.

In OPG’s assessment, the 11 per cent smoothing is the best alternative as it was either the best or second best on four of the five considerations above, and no worse than third best on the remaining consideration. The proposed nuclear payment amounts proposed in Ex. I1-3-1 have been determined based on this level of deferred recovery. OPG therefore proposes to defer the collection of approximately $1.6B in nuclear revenue requirements for 2017 through
2021, which is the sum of the deferred revenue requirement amounts for those years shown in Chart 4.

**Chart 4**

OPG Proposed Deferred Nuclear Revenue Requirement\(^{17}\)

<table>
<thead>
<tr>
<th>Proposed Revenue Requirement ($M)</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forecast Production (TWh)</td>
<td>38.10</td>
<td>38.47</td>
<td>39.03</td>
<td>37.36</td>
<td>35.38</td>
</tr>
<tr>
<td>Smoothed Rate ($/MWh)</td>
<td>$65.81</td>
<td>$73.05</td>
<td>$81.09</td>
<td>$90.01</td>
<td>$99.91</td>
</tr>
<tr>
<td>Smoothed Revenue ($M)</td>
<td>$2,507</td>
<td>$2,810</td>
<td>$3,165</td>
<td>$3,362</td>
<td>$3,535</td>
</tr>
<tr>
<td>Deferred Revenue Requirement ($M)</td>
<td>$694</td>
<td>$412</td>
<td>$145</td>
<td>$462</td>
<td>$(97)</td>
</tr>
</tbody>
</table>

3.0 MID-TERM PRODUCTION REVIEW

OPG seeks approval of a mid-term production review in the first half of 2019 (i.e., prior to July 1, 2019) for:

1) an update of the nuclear production forecast and consequential updates to nuclear fuel costs underpinning the payment amounts for the final two-and-a-half years of the five-year application period (July 1, 2019 to December 31, 2021); and

2) disposal of applicable audited deferral and variance account balances (most accounts would reflect amounts accumulated over the period January 1, 2016 to December 31, 2018) as well as any remaining unamortized portions of previously approved amounts with recovery period extending beyond December 31, 2018.

3.1 Rationale for Mid-Term Review

In this application, OPG has provided a nuclear production forecast that covers the full five-year period from January 1, 2017 to December 31, 2021. The company’s nuclear production forecast and forecasting process are described in detail in Ex. E2-1-1. The production forecast is based on a set of current assumptions that are challenging to meet, with the risk of

\(^{17}\) Proposed Revenue Requirement per Ex I-1-1 Table 2
Forecast Production per Ex E-2-1 Table 1
Smoothed Rate determined by escalating the existing $59.29 approved nuclear payment amount from EB-2013-0321 by 11% each year
Smoothed Revenue determined by applying the Smoothed Rate to the Forecast Production
Deferred Revenue calculated as the difference between the Proposed Revenue Requirement and the Smoothed Revenue
deviations from forecast increasing into the second half of the application. OPG’s mid-term review application will include the revised production forecast underpinning its latest approved business plan for the period July 1, 2019 to December 31, 2021 (the “mid-term production forecast”). The mechanics of the mid-term review proposal are discussed in section 3.2.

Substantial uncertainty exists relating to events that could result in substantial impacts on OPG’s production in the latter half of OPG’s five-year application. Circumstances could result in substantially higher or lower production than currently forecast. If production is higher than forecast, customer bills would be unnecessarily inflated (i.e., the higher production would result in a credit balance in the proposed Mid-term Nuclear Production Variance Account, to be refunded to customers in the next payment amount application). If production is lower than forecast, OPG may not recover its revenue requirement. Mitigating this risk benefits both customers and the company.

OPG expects that the nuclear production forecast that will be included in its future approved business plans will reflect an increased level of certainty related to events that may affect production during the second half of the test period, providing a sufficiently robust basis for setting reasonable production performance targets for the second half of the test period that would be fair to both customers and OPG.

As discussed during consultation with stakeholders, several factors make it extremely difficult to accurately forecast OPG’s annual nuclear production over the five-year period covered by this application:

i. Public Policy Changes: Changes to public policy, especially the Government of Ontario’s Long Term Energy Plan (“LTEP”) could impact OPG’s nuclear production. In particular, a change to the refurbishment schedule for future units at the Darlington generating station could materially alter OPG’s production schedule within the period of this Application.

ii. Pickering Extended Operations: Canadian Nuclear Safety Commission (“CNSC”) approval is still required and, as discussed in Ex. F2-2-3, OPG has not yet completed
work necessary to confirm that the Pickering units would be fit to operate beyond 2020.

iii. Execution of Darlington Refurbishment Program: If refurbishment of the first unit at Darlington is completed earlier or later than scheduled, production may vary. In addition, there is a risk that the post-refurbishment forced loss rate at Darlington may vary from OPG’s current forecast. These factors have the potential to materially decrease or increase production, depending on the circumstances.

iv. Regulatory Requirements and Approvals: OPG’s nuclear facilities are subject to significant regulatory oversight. Changing requirements and work required to comply with existing requirements have the potential to affect OPG’s nuclear production forecast.

v. Aging Facilities: The risk of unplanned outages increases as units begin to approach their end of life, in particular for Pickering given on-going work on asset condition assessment and fuel channel work and pending CNSC licence renewals.

OPG expects that it will be better able to assess these and other risks, and their potential effect on production, at the time of the proposed mid-term review.

The mid-term review of nuclear production is also consistent with the rate-smoothing requirements in O. Reg. 53/05 and would protect both customers and OPG. The regulation requires the OEB to determine revenue requirements for the nuclear facilities for each year on a five-year basis, and to determine the portion of the approved revenue requirement to be recorded in the RSDA. Subject to the OEB concluding that rates are no longer just and reasonable pursuant to Section 78.1 of the Act, the regulation does not entitle the OEB to revisit those approved revenue requirement amounts during the five years. However, while the revenue requirement must be determined on a five-year basis, no such limitation exists for the determination of production.

The production forecast is a critical element of OPG’s rate-setting framework given OPG’s rate structure. As noted in Ex. E2-1-1, there are a number of factors that could materially

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18 O. Reg. 53/05, sub-paragraphs 6(2)(i) and (ii).
impact OPG’s production which are too uncertain to predict with reasonable precision. Given
the relatively long term of this application and the uncertainty of nuclear production during
that period, a mid-term review of nuclear production and related fuel costs for the second half
of the application term (i.e., July 1, 2019 to December 31, 2021) would help address the
forecast uncertainty inherent in OPG’s production forecast as it looks further into the future
and provides a basis to set reasonable production performance targets for the second half of
the application term.

In general, it is more difficult to forecast events further in the future. This difficulty increases
further when the subject matter of the forecast is inherently uncertain. Since the inception of
regulation by the OEB, there have been a number of variances between OEB approved and
actual production. It has proven difficult to forecast nuclear production in the past where
OPG’s Pickering and Darlington facilities were operating in a comparatively steady state
compared to the operating circumstances that will be facing these facilities during the
application period. Even with a mid-term review, the proposed ratemaking methodology will
result in a significant increase in production forecast risk compared to previous applications.19

As discussed in Ex. A1-3-2, a completely variable rate provides a strong financial incentive to
OPG to achieve or surpass the OEB approved production forecast, thereby increasing the
quality of service (e.g., increased availability, reduced EFOR) provided to customers. The
approved production forecast is effectively a performance target with financial rewards and
penalties.

3.2 Mechanics of Mid-Term Production Review

OPG proposes to file an application to review the company’s updated nuclear production
forecast and associated fuel costs in the first quarter of 2019. The scope of this application
would be limited to a review of OPG’s nuclear production forecast for the period from July 1,
2019 to December 31, 2021, any consequential revisions to forecast fuel costs, and the
disposition of audited December 31, 2018 balances in deferral and variance accounts

19 In previous applications, OPG’s payment amounts have been based on forecast production of two years or
less.
including any remaining unamortized portions of previously approved amounts with recovery periods extending beyond December 31, 2018. OPG does not propose to re-open any other elements of this Application in the mid-term review.

The application will present the impact of the production variance from July 1, 2019 to December 2021. The production variance will be the difference between: (i) the nuclear production forecast approved in this Application and, (ii) the nuclear production forecast proposed by OPG in the mid-term review application. The annual production variance will be multiplied by the net of the approved smoothed nuclear payment amount and the average fuel cost in the approved revenue requirement for the applicable year. The amounts determined above will be recorded in the proposed Mid-Term Nuclear Production Variance Account described in Ex H1-1-1.