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March 6, 2018

VIA RESS AND COURIER

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
P.O. Box 2319
2300 Yonge Street, 27th Floor
Toronto, ON M4P 1E4

Dear Ms. Walli:

**RE: EB-2018-0002 – AN APPLICATION FOR AN
ACCOUNTING ORDER ESTABLISHING A DEFERRAL
ACCOUNT TO CAPTURE THE REVENUE REQUIREMENT
IMPACT ON ONTARIO POWER GENERATION'S
PRESCRIBED NUCLEAR FACILITIES RESULTING FROM
CHANGES IN STATION END-OF-LIFE DATES**

On December 29, 2017, OPG submitted its Application for EB-2018-0002 via the Regulatory Electronic Submission System (see Attachment A). This Application has been updated to reflect the correct OEB case number (see blackline in Attachment B).

Consistent with the OEB's prior directions, OPG has provided notice to intervenors of record in EB-2012-0002, EB-2013-0321, EB-2015-0374 and EB-2016-0152 via email.

OPG is also re-submitting this application, and corresponding blackline, on RESS.

Best Regards,

[Original signed by]

Brenda MacDonald
Vice President, Regulatory Affairs
Ontario Power Generation

Attach.

cc: Mel Hogg (OPG) via e-mail
Charles Keizer (Torys) via e-mail
EB-2016-0152 Intervenors via e-mail
EB-2015-0374 Intervenors via e-mail
EB-2013-0321 Intervenors via e-mail
EB-2012-0002 Intervenors via e-mail



Brenda MacDonald
Vice President

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December 29, 2017

VIA RESS AND COURIER

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
P.O. Box 2319
2300 Yonge Street, 27th Floor
Toronto, ON M4P 1E4

Dear Ms. Walli:

RE: EB-2017-XXXX – AN APPLICATION FOR AN ACCOUNTING ORDER ESTABLISHING A DEFERRAL ACCOUNT TO CAPTURE THE REVENUE REQUIREMENT IMPACT ON ONTARIO POWER GENERATION’S PRESCRIBED NUCLEAR FACILITIES RESULTING FROM CHANGES IN STATION END-OF-LIFE DATES

Attached please find an Application by Ontario Power Generation Inc. (“OPG”) for an accounting order to establish a deferral account to record, from January 1, 2018 until the effective date of the OEB’s next payment amounts order, the revenue requirement impact of changes to nuclear liabilities and depreciation and amortization expense resulting from changes to station end-of-life (“EOL”) dates for OPG’s Pickering prescribed nuclear facilities that will be effective December 31, 2017.

This Application is in response to the findings in the OEB’s recently issued EB-2016-0152 Decision and Order, which maintained certain requirements for accounting order applications established in the OEB’s EB-2012-0002 and EB-2013-0321 decisions and orders. These decisions and orders establish that OPG will apply for an accounting order if there are material changes to its nuclear station service life estimates that are

not otherwise reflected in payment amounts or an authorized deferral or variance account. This Application is consistent with OPG's EB-2015-0374 application for a similar accounting order and reflects the OEB's findings in the EB-2015-0374 Decision and Order establishing the requested deferral account in that proceeding.

OPG expects that the ultimate balance in the proposed deferral account, as well as the timing and manner of its disposition, will be reviewed as part of a future OPG application. Accordingly, there is no rate impact at this time from this Application.

Consistent with the OEB's prior directions, OPG has provided notice to intervenors of record in EB-2012-0002, EB-2013-0321, EB-2015-0374 and EB-2016-0152.

OPG is also submitting this application on the Regulatory Electronic Submission System.

Best Regards,

[Original signed by]

Brenda MacDonald
Vice President, Regulatory Affairs
Ontario Power Generation

Attach.

cc: John Beauchamp (OPG) via e-mail
Charles Keizer (Torys) via e-mail
EB-2016-0152 Intervenors via e-mail
EB-2015-0374 Intervenors via e-mail
EB-2013-0321 Intervenors via e-mail
EB-2012-0002 Intervenors via e-mail

ONTARIO ENERGY BOARD

IN THE MATTER OF the *Ontario Energy Board Act, 1998*, S. O. 1998, c. 15, Schedule B;

AND IN THE MATTER OF an Application by Ontario Power Generation Inc. pursuant to section 78.1 of the *Ontario Energy Board Act, 1998* for an Order or Orders determining payment amounts for the output of certain of its generating facilities.

APPLICATION FOR AN ACCOUNTING ORDER ESTABLISHING A DEFERRAL ACCOUNT TO CAPTURE THE REVENUE REQUIREMENT IMPACT ON OPG'S PRESCRIBED NUCLEAR FACILITIES RESULTING FROM CHANGES IN STATION END-OF-LIFE DATES

1. OPG has determined that it will change, for accounting purposes, the current end-of-life ("EOL") date for its Pickering nuclear facilities, effective December 31, 2017, to December 31, 2022 for Units 1 and 4 and December 31, 2024 for Units 5 to 8. This change will impact the depreciation and amortization expense associated with the net book values of assets of the Pickering nuclear facilities. The change also will be reflected through a change in OPG's accounting obligation (i.e. asset retirement obligation) and associated costs for nuclear decommissioning and nuclear waste management liabilities ("nuclear liabilities"). OPG's 2017 audited annual financial statements will record the related adjustment to the asset retirement obligation as of December 31, 2017.
2. The above changes will have material revenue requirement impacts beginning January 1, 2018.
3. OPG filed an application (EB-2016-0152) with the Ontario Energy Board ("OEB") under section 78.1 of the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15 (Schedule B) seeking approval for payment amounts for generating facilities prescribed under

Ontario Regulation 53/05 (“O. Reg. 53/05”). The OEB issued its Decision and Order on the application on December 28, 2017.

4. The EB-2016-0152 Decision and Order determined, among other things, that 2017-2021 operating cost¹ and generation impacts associated with the continued operation of Pickering beyond 2020² will be included the 2017-2021 revenue requirements for the prescribed nuclear facilities. The Decision and Order also accepted OPG’s proposal that these revenue requirements reflect nuclear liabilities costs and depreciation and amortization expense on the basis of the existing Pickering EOL date of December 31, 2020 for accounting purposes, subject to a continuing obligation on OPG to file an application for an accounting order when it proposes to effect a change in the station lives of its prescribed nuclear facilities.³ This Application is in response to the findings in the EB-2016-0152 Decision and Order.
5. The EB-2016-0152 Decision and Order recognized OPG’s continuing requirement to apply for an accounting order if there are material changes to service life estimates as set out in the OEB’s EB-2012-0002 and EB-2013-0321 decisions and orders.⁴ Specifically, the EB-2012-0002 and EB-2013-0321 decisions and orders require an application for an accounting order if:
 - i. OPG proposes an accounting change impacting the calculation of its nuclear liabilities, other than as a result of an Ontario Nuclear Funds Agreement (“ONFA”) Reference Plan update, which results in a revenue requirement impact for the prescribed facilities⁵; or

¹ EB-2016-0152 Decision and Order, pp. 52-68

² EB-2016-0152 Decision and Order, pp. 12-13

³ EB-2016-0152 Decision and Order, pp. 67-68

⁴ EB-2016-0152 Decision and Order, p. 86

⁵ EB-2013-0321 Decision, p. 127; requirement was originally established in the EB-2012-0002 Payment Amounts Order (p. 7)

- ii. OPG proposes to change the EOL dates of its prescribed nuclear facilities, for depreciation and amortization purposes, which results in a non-Asset Retirement Cost (“ARC”) revenue requirement impact⁶.
6. The EB-2012-0002 and EB-2013-0321 decisions and orders state that an accounting order application is only required if the revenue requirement impact in question is neither reflected in current or proposed payment amounts nor recorded in an authorized deferral or variance account, and the annualized revenue requirement impact for the prescribed facilities is \$10M or greater.
7. The revenue requirement impact resulting from the above changes is not reflected in either the current payment amounts or the payment amounts expected to be approved in the EB-2016-0152 Payment Amount Order. OPG proposes that none of the revenue requirement impact be recorded in the Nuclear Liability Deferral Account (or any other authorized deferral or variance account).
8. The financial impact of the December 31, 2017 change in the asset retirement obligation and associated costs for the Bruce facilities, determined in accordance with US GAAP, will be reflected in the Bruce Lease Net Revenues Variance Account in accordance with the EB-2016-0152 Decision and Order and the EB-2016-0152 Payment Amounts Order and is therefore not subject to this Application.
9. As was the case in EB-2015-0374, OPG is not able to provide the annual revenue requirement impact associated with the above noted changes at this time, primarily because final year-end information required to calculate the December 31, 2017 adjustment to the asset retirement obligation is not yet available. OPG will determine the asset retirement obligation adjustment in conjunction with other adjustments necessary to finalize OPG’s 2017 annual financial statements. However, based on preliminary estimates and as directionally illustrated in paragraph 11 below, OPG expects that the annual revenue requirement impact will be a credit to ratepayers in excess of the \$10M annual materiality threshold.

⁶ EB-2013-0321 Payment Amounts Order, pp. 9-10

10. OPG requests the OEB's approval to establish a deferral account to record the revenue requirement impact on the prescribed facilities arising from changes to nuclear liabilities on December 31, 2017 and depreciation and amortization expense beginning January 1, 2018 resulting from changes to Pickering EOL dates. The nuclear liabilities impact will be determined in accordance with the methodology approved by the OEB for determining the revenue requirement impacts of nuclear liabilities for OPG, as originally established in the EB-2007-0905 Decision with Reasons and most recently confirmed in the EB-2016-0152 Decision and Order.⁷
11. Subject to the impact of the December 31, 2017 asset retirement obligation adjustment, OPG proposes that the revenue requirement impact recorded in the proposed deferral account be based on forecast 2018 opening gross plant and accumulated depreciation and amortization amount and forecast 2018-2021 capital in-service additions included in nuclear rate base values that will be approved through the EB-2016-0152 Payment Amounts Order. Using corresponding values proposed in OPG's pre-filed evidence from the EB-2016-0152 application, OPG illustratively estimates that depreciation and amortization expense (both ARC and non-ARC) would decrease by approximately \$150M in 2018, \$150M in 2019, and \$155M in 2020, partially offset by an increase of approximately \$95M in 2021, for a net decrease of approximately \$360M over the period.⁸
12. The above impacts are illustrative as they do not reflect adjustments to OPG's proposed capital in-service additions and nuclear rate base values resulting from the OEB's findings in the EB-2016-0152 Decision and Order, which OPG will reflect in the draft Payment Amounts Order submission, or the anticipated year-end 2017 change to the asset retirement obligation and corresponding ARC balances, which will be finalized as part of OPG's 2017 financial year close process and reflected in the 2017

⁷ EB-2016-0152 Decision and Order, pp. 96-97

⁸ Given the magnitude and illustrative nature of the estimates, consequential impacts on cost of capital and income tax components of the revenue requirement have not been included, but would be captured in the actual revenue requirement impact recorded in the proposed deferral account. The non-ARC cost of capital component will be calculated using the OEB-approved capital structure and cost of capital rates that will be reflected in the EB-2016-0152 Payment Amounts Order.

audited annual financial statements. Both of these impacts will be captured in the calculation of the actual revenue requirement impact recorded in the deferral account.

13. The deferral account is proposed to record the revenue requirement impact effective January 1, 2018 until the effective date of the OEB's next nuclear payment amounts order incorporating the above impacts into OPG's payment amounts.
14. As the revenue requirement impact commences January 1, 2018, OPG requests that the OEB issue an interim order effective January 1, 2018, approving the establishment of the requested deferral account on an interim basis. This will permit the above revenue requirement impacts to be recorded in a deferral account pending the OEB's final order in respect of this Application.
15. OPG expects that information supporting the balance in the proposed account, as well as the timing and manner of its disposition, would be reviewed in a future OPG application. Accordingly, there is no rate impact at this time from this Application.
16. As there is no immediate rate impact, OPG requests that this Application proceed by way of a written hearing.
17. The Application will be supported by written evidence, as required. The written evidence filed by OPG may be supplemented or amended from time to time by OPG prior to the OEB's final decision on the Application.
18. OPG further applies to the OEB pursuant to the provisions of the Act and the OEB Rules of Practice and Procedure for such orders and directions as may be necessary in relation to the Application and the proper conduct of this proceeding.
19. The persons affected by this Application are all electricity consumers in Ontario. It is impractical to set out the names and addresses of the consumers because they are too numerous. However, consistent with the OEB's prior directions, OPG has provided notice to intervenors of record in EB-2012-0002, EB-2013-0321, EB-2015-0374 and EB-2016-0152.

20. OPG requests that copies of all documents filed with the OEB by each party to this Application along with copies of all comments filed with the OEB in accordance with Rule 24 of the OEB Rules of Practice and Procedure be served on the applicant and the applicant's counsel as follows:

a) The Applicant
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Dated at Toronto, Ontario, this 29th day of December, 2017:

[Original signed by]

Brenda MacDonald
Vice President, Regulatory Affairs

1.0 BACKGROUND

OPG filed an application (EB-2016-0152) with the OEB under section 78.1 of the *Ontario Energy Board Act, 1998, S.O. 1998, c. 15 (Schedule B)* seeking approval for payment amounts for generating facilities prescribed under *Ontario Regulation 53/05* (“O. Reg. 53/05”). The OEB issued its Decision and Order on the application on December 28, 2017. The EB-2016-0152 Payment Amounts Order will establish, among other things, nuclear payment amounts effective June 1, 2017 that are expected to continue until OPG’s next application for nuclear payment amounts.

OPG’s EB-2016-0152 application proposed and the Decision and Order accepted that the revenue requirements for the prescribed nuclear facilities will reflect OPG’s nuclear liabilities costs and depreciation and amortization expense on the basis of the existing Pickering EOL dates for accounting purposes of December 31, 2020 for Units 1 and 4 and Units 5 to 8, subject to a continuing obligation on OPG to file an application for an accounting order when it proposes to effect a change in the station lives of its prescribed nuclear facilities.⁹ The Decision and Order also accepted that 2017-2021 operating cost¹⁰ and nuclear generation impacts associated with the continued operation of Pickering beyond 2020 will be included in the 2017-2021 revenue requirements for the prescribed nuclear facilities.¹¹

OPG’s evidence in EB-2016-0152 was that it was undertaking a set of initiatives to extend Pickering operation beyond 2020 and that the December 31, 2020 accounting EOL was expected to be reassessed when further technical work confirmed, with the necessary high confidence, the units’ ability to operate beyond 2020, recognizing that approval by the Canadian Nuclear Safety Commission (“CNSC”) is required.

The existing December 31, 2020 EOL date for Pickering Units 5 to 8 was adopted effective December 31, 2015, based on OPG achieving high confidence that the units would be technically fit to operate until at least the end of 2020. Effective January 1, 2016

⁹ EB-2016-0152 Decision and Order, pp. 67-68

¹⁰ EB-2016-0152 Decision and Order, pp. 52-68

¹¹ EB-2016-0152 Decision and Order, pp 12-13

and pending the effective date of the EB-2016-0152 payment amounts, the prescribed facilities' revenue requirement impact on the nuclear liabilities and depreciation and amortization expense associated with the December 31, 2015 change in the Pickering Units 5-8 EOL date (as well as the change in EOL dates for OPG's other nuclear stations adopted at the same time) was being recorded in the Impact Resulting from Changes in Station End-of-Life Dates (December 31, 2015) Deferral Account established by the OEB pursuant to OPG's EB-2015-0374 accounting order application.

The EB-2016-0152 Decision and Order recognized OPG's continuing requirement to apply for an accounting order if there are material changes to service life estimates as set out in the OEB's EB-2012-0002 and EB-2013-0321 decisions and orders.¹² Pursuant to the OEB's EB-2012-0002 and EB-2013-0321 decisions and orders, an application for an accounting order is required if:

- (i) OPG proposes an accounting change impacting the calculation of its nuclear liabilities, other than as a result of an ONFA Reference Plan update, which results in a revenue requirement impact for the prescribed facilities;¹³ or
- (ii) OPG proposes to change the EOL dates of its prescribed nuclear facilities for depreciation and amortization purposes that results in a non-ARC revenue requirement impact¹⁴.

The EB-2012-0002 and EB-2013-0321 decisions and orders state that an accounting order application is only required if the revenue requirement impact is neither reflected in current or proposed payment amounts nor recorded in an authorized deferral or variance account, and the annualized revenue requirement impact for the prescribed facilities is \$10M or greater.

¹² EB-2016-0152 Decision and Order, p. 86

¹³ EB-2013-0321 Decision, p. 127; requirement was originally established in the EB-2012-0002 Payment Amounts Order (page 7)

¹⁴ EB-2013-0321 Payment Amounts Order, pp. 9-10

2.0 CHANGES IN NUCLEAR STATION END-OF-LIFE DATES

There are changes to the EOL dates, for accounting purposes, for the Pickering nuclear station. The change to the EOL dates will be implemented effective December 31, 2017 through adjustments to OPG's nuclear Asset Retirement Obligation ("ARO") and Asset Retirement Costs ("ARC") balances and will be reflected in depreciation and amortization expense beginning January 1, 2018.

Specifically, OPG has achieved high confidence, as described below, that Pickering Units 1 and 4 are expected to operate until December 31, 2022 and Pickering Units 5 to 8 to operate until December 31, 2024 and is adopting these dates as the EOL dates for accounting purposes, effective December 31, 2017. The revised EOL dates are consistent with the planning assumptions underpinning OPG's forecasts of operating costs and generation forecasts for the 2017-2021 period approved by the OEB in the EB-2016-0152 Decision and Order.

The change in the Pickering EOL dates reflects OPG's high technical confidence that the units can safely operate to the above noted dates based on the programs and provisions in place to assure fitness-for-service of fuel channel components. The work program to support fitness-for-service of fuel channels includes the Fuel Channel Life Assurance project ("FCLA") to address the elongation of the fuel channels, which is considered to be the specific life-limiting degradation mechanism that could impact station operations beyond 2020. Based on the results of the FCLA, completed earlier in 2017, OPG has recently selected a strategy to manage fuel channel elongation and has incorporated it into the life cycle management plans.

The above noted technical high confidence is consistent with the safety case reflected in OPG's power reactor operating license application for the Pickering station submitted to the CNSC in August 2017. The application seeks a ten-year license renewal to August 31, 2028, which would span the planned remaining commercial operations period to 2024, through the planned period to place the station in a safe store state. In support of the license renewal, OPG has completed a Periodic Safety Review (PSR), a comprehensive assessment of the station's design and operation to confirm that there is a high level of

safety throughout the operating life and to determine what reasonable and practical enhancements can be made to further improve safety. The Pickering PSR also includes a component condition assessment of the station to identify the work required to support the continued operation of the station. The Pickering PSR has confirmed that extending station operation to 2024 will continue to pose minimal risk to the health, safety and security of workers, the public and the environment. The final major element of the PSR was completed and submitted to the CNSC in November 2017.

The CNSC review of OPG's PSR submission and license application is underway and a decision will be rendered about August of 2018 after public hearings scheduled in April and June of 2018. While public hearings have not yet occurred, OPG has taken steps to be in a good position to achieve a successful license renewal. Namely, OPG has demonstrated a strong record of operational safety; achieved a CNSC integrated plant rating of fully satisfactory (the highest safety rating possible) over the last two years; has programs in place to support the provision of safe and reliable service; and completed the PSR process, including component condition assessments to ensure that the major plant components have sufficient life to operate through the end of 2024, as well as an assessment against modern codes and standards.

3.0 REVENUE REQUIREMENT IMPACTS AND MATERIALITY

The revenue requirement impact arises from changes in depreciation and amortization expense for non-ARC and existing ARC asset balances, as well as from the anticipated changes in the ARO (and associated ARC) at December 31, 2017. As was the case in EB-2015-0374, OPG is not able to provide the total annual revenue requirement impact associated with these changes at this time, primarily because final year-end information required to calculate the December 31, 2017 ARO adjustment is not yet available. However, based on preliminary estimates and as directionally illustrated below, OPG expects that the total annual revenue requirement impact will be a credit to ratepayers in excess of the \$10M annual materiality threshold for filing this accounting order application.

Subject to the impact of the December 31, 2017 ARO/ARC adjustment, OPG proposes that the revenue requirement impact be based on forecast 2018 opening gross plant and accumulated depreciation and amortization amounts and forecast 2018-2021 capital in-service additions included in nuclear rate base values that will be approved through the EB-2016-0152 Payment Amounts Order. That is, OPG would recalculate the OEB-approved nuclear rate base and depreciation and amortization expense for the 2018-2021 period by applying the revised Pickering EOL dates to these values effective January 1, 2018, holding all other variables constant. Using corresponding values from OPG's pre-filed evidence in the EB-2016-0152 application, OPG illustratively estimates that this would decrease depreciation and amortization expense (both ARC and non-ARC) by approximately \$150M in 2018, \$150M in 2019, and \$155M in 2020, partially offset by an increase of approximately \$95M in 2021, for a net decrease of approximately \$360M over the period.¹⁵

The above impacts are illustrative as they do not reflect adjustments to OPG's proposed in-service capital additions and nuclear rate base values resulting from the OEB's findings in the EB-2016-0152 Decision and Order, which OPG will reflect in the draft Payment Amounts Order submission, or the anticipated year-end 2017 change to the ARO and ARC balances, which will be reflected in OPG's 2017 audited annual financial statements. Both of these impacts will be captured in the calculation of the actual revenue requirement impact recorded in the deferral account.

As in EB-2015-0374, a substantial amount of work, based on actual year-end information (including the actual unadjusted ARO balance and discount rate for calculating the ARO change), is required to determine the exact December 31, 2017 ARO and ARC adjustments reflecting the above EOL date changes. Once these adjustments have been finalized as part of OPG's 2017 financial year close process, the revenue requirement impacts beginning in 2018 can be determined. The nuclear liabilities impact will be

¹⁵ Given the illustrative nature of the estimates, consequential impacts on cost of capital and income tax components of the revenue requirement have not been included, but would be captured in the actual revenue requirement impact calculations. The non-ARC cost of capital component will be calculated using the OEB-approved capital structure and cost of capital rates that will be reflected in the EB-2016-0152 Payment Amounts Order.

determined in accordance with the methodology originally approved by the OEB in the EB-2007-0905 Decision with Reason and as most recently confirmed in the EB-2016-0152 Decision and Order.¹⁶

Information required to support the revenue requirement impact will be filed as part of an OPG application to dispose of the balance in the proposed deferral account, discussed below, or as part of normal filing requirements in OPG's next payment amounts application, whichever is earlier. This will include evidence specifically addressing the impact of changes in the nuclear liabilities, as similarly provided in a number of previous OPG proceedings. The accuracy of the amounts recorded in the proposed deferral account will be subject to review in a future application as part of any proposed disposition of the account balance.

As certain costs associated with the nuclear liabilities are, by their nature, shared across the nuclear fleet, changes in lifecycle used fuel and waste volumes resulting from changes to a particular station EOL date typically impact the ARO and ARC for all of OPG's nuclear stations. As such, changes to the Pickering EOL dates are expected to impact the ARO and ARC for the Bruce facilities. The financial impact of any such changes for the Bruce facilities, determined in accordance with US GAAP, will be recorded in the Bruce Lease Net Revenues Variance Account in accordance with the EB-2016-0152 Decision and Order and EB-2016-0152 Payment Amounts Order and therefore is not subject to this Application.

4.0 NEW DEFERRAL ACCOUNT

OPG requests the OEB's approval to establish a new deferral account to record the revenue requirement impact on the prescribed facilities arising from changes to the nuclear liabilities on December 31, 2017 and changes to depreciation and amortization expense beginning January 1, 2018 resulting from changes to the EOL dates for the Pickering station as outlined in Section 2.0.

¹⁶ EB-2016-0152 Decision and Order, pp. 96 and 97

4.1 Justification

This Application is being filed pursuant to the EB-2012-0002, EB-2013-0321 and EB-2016-0152 decisions and orders, as the changes at the end of 2017:

- (i) will result in a revenue requirement impact for the prescribed facilities beginning January 1, 2018 that will not be reflected in the 2018 onwards payment amounts that will be established by the EB-2016-0152 Payment Amount Order (and is not reflected in the existing payment amounts in effect until that time);
- (ii) will result in an annualized revenue requirement impact for the prescribed facilities that is expected to be higher than the \$10M materiality threshold; and
- (iii) will not be recorded in a previously authorized deferral or variance account, including the Nuclear Liability Deferral Account, as proposed by OPG.¹⁷

OPG is making the change in the Pickering EOL dates for accounting purposes because it has achieved the necessary high confidence that the station will operate to these dates. As discussed in Section 2.0, OPG has achieved this high confidence from a number of activities that took place during the 2017 year. The revised dates are consistent with the planning assumptions underpinning OEB-approved forecasts of operating costs and generation for the prescribed nuclear facilities for the 2017-2021 period and represent OPG's current best estimate of the expected period of operation for the station. OPG will

¹⁷ The change in the nuclear liabilities resulting from the revised Pickering EOL dates will implement, for accounting purposes, the Pickering end-of-life assumptions reflected in the approved 2017-2021 ONFA Reference Plan. As such, the nuclear liabilities revenue requirement impact arising from the Pickering end-of-life change would be eligible for recording in the Nuclear Liability Deferral Account. The non-ARC revenue requirement impact of the Pickering EOL date change is not eligible to be recorded in the Nuclear Liability Deferral Account (or any other authorized deferral or variance account) and would therefore require an accounting order application in any event. For greater transparency and regulatory efficiency, OPG proposes that both the nuclear liabilities and the non-ARC depreciation and amortization revenue requirement impact be recorded in a single, new deferral account, to be considered as part of this Application.

be making the associated change to the December 31, 2017 nuclear ARO and ARC balances in order to fairly present its financial statements in accordance with US GAAP.

4.2 Account Operation and Reporting

OPG proposes that the deferral account shall record the revenue requirement impact on OPG's prescribed nuclear facilities as outlined in this Application. As the change in the Pickering station life and ARO and ARC balances will be effective December 31, 2017, the corresponding revenue requirement impact will begin on January 1, 2018. Therefore, OPG proposes to record the revenue requirement impact effective January 1, 2018 until new payment amounts incorporating these impacts come into effect. To enable the recording of the revenue requirement effective January 1, 2018, OPG requests that the OEB establish the proposed deferral account effective January 1, 2018 on an interim basis pending the outcome of this Application.

The proposed deferral account would operate similarly to the Impact Resulting from Changes in Station End-of-Life Dates (December 31, 2015) Deferral Account established in EB-2015-0374. Illustrative accounting order and account entries for the proposed deferral account are provided in Appendix A. The account would not record amounts otherwise recorded in another authorized deferral or variance account. OPG proposes that the description of deferral account mechanics and deferral account entries apply equally and consistently during the period of the interim approval.

Similar to the Impact Resulting from Changes in Station End-of-Life Dates (December 31, 2015) Deferral Account, OPG proposes that no interest be recorded on the balance of the new deferral account.

If the proposed account is approved, OPG would file its balance in conjunction with its regular reporting on other variance and deferral accounts approved by the OEB.

4.3 OPG's Future Applications

OPG will provide a proposal for the disposition of amounts recorded in the new deferral account in a future application. As part of that application, OPG will also provide detailed

information to support amounts recorded in the account. The account balance will be included in the audit of OPG's deferral and variance account balances.

As part of the next nuclear payment amounts application, subject to the OEB's filing guidelines, OPG also expects to continue to provide information with respect to its nuclear liabilities, separately for the prescribed and Bruce facilities and in the format consistent with EB-2016-0152, Ex. C2-1-1 Tables 1 to 5.

OPG acknowledges that establishment of the proposed deferral account does not constitute approval of the balance that will be recorded in this account and that parties will have the opportunity to review and test the evidence filed in a future OPG application regarding the actual entries and deferral account balance.

**Illustrative Accounting Order
Ontario Power Generation Inc.
EB-2017-XXXX**

**Impact Resulting from Changes to Pickering Station End-of-Life Dates
(December 31, 2017) Deferral Account**

OPG shall establish this new account, effective January 1, 2018, to record the revenue requirement impact arising from changes to nuclear liabilities and depreciation and amortization expense resulting from changes to station end-of-life dates for the Pickering prescribed nuclear facilities that are effective December 31, 2017.

Entry 1: Nuclear liability revenue requirement for prescribed facilities

<u>Entry</u>	<u>Debit</u>	<u>Credit</u>
DR/CR Depreciation Expense	x,xxx	x,xxx
DR/CR Return on Rate Base	x,xxx	x,xxx
DR/CR Income Tax Expense	x,xxx	x,xxx
DR/CR Used Fuel Storage and Disposal Variable Expense	x,xxx	x,xxx
DR/CR Low & Intermediate Level Waste Management Variable Expense	x,xxx	x,xxx
CR/DR Impact Resulting from Changes in Pickering Station End-of-Life Dates (December 31, 2017) Deferral Account ¹⁸	x,xxx	x,xxx

To record the impact on nuclear liabilities costs resulting from changes in end-of-life dates on Asset Retirement Cost (“ARC”) depreciation, the associated impacts on the return on rate base and variable used fuel and waste management expenses, and the tax impact of the settlement with customers of the net amount.

¹⁸ The entry is expected to be a net debit in 2021 reflecting a higher Pickering ARC depreciation expense to be recovered from ratepayers in that year based on the extended life to 2022/2024, compared to nil ARC depreciation included in the EB-2016-0152 revenue requirement for 2021 based on December 31, 2020 end-of-life.

Entry 2: Non-ARC revenue requirement impact for prescribed facilities

<u>Entry</u>	<u>Debit</u>	<u>Credit</u>
DR/CR Depreciation Expense	x,xxx	x,xxx
DR/CR Income Tax Expense	x,xxx	x,xxx
CR Return on Rate Base		x,xxx
CR/DR Impact Resulting from Changes in Pickering Station End-of-Life Dates (December 31, 2017) Deferral Account ¹⁹	x,xxx	x,xxx

To record the impact of the change in nuclear station lives on non-ARC depreciation expense, the associated impact on the return on net rate base through the change in accumulated depreciation, and the tax impact of the settlement with customers of the net amount.

OPG shall not record interest on the balance of this account.

OPG shall file the balance in the Impact Resulting from Changes in Pickering Station End-of-Life Dates (December 31, 2017) Deferral Account in conjunction with its regular reporting on other deferral and variance accounts approved by the OEB.

The account entries will continue until the effective date of the next payment amounts order incorporating the corresponding changes to the Pickering station end-life dates in nuclear payment amounts.

¹⁹ The entry is expected to be a net credit in 2018-2020 reflecting a lower non-ARC depreciation expense as a result of extending the Pickering EOL from 2020 to 2022/2024. The entry is expected to be a net debit in 2021 reflecting a higher Pickering non-ARC depreciation expense to be recovered from ratepayers in that year based on the extended life to 2022/2024, compared to the assumed non-ARC depreciation amount included in the EB-2016-0152 revenue requirement for 2021 that was set to equal forecast Pickering in-service additions in that year.

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December 29, 2017

VIA RESS AND COURIER

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
P.O. Box 2319
2300 Yonge Street, 27th Floor
Toronto, ON M4P 1E4

Dear Ms. Walli:

**RE: EB-2018-0002 – AN APPLICATION FOR AN
ACCOUNTING ORDER ESTABLISHING A DEFERRAL
ACCOUNT TO CAPTURE THE REVENUE REQUIREMENT
IMPACT ON ONTARIO POWER GENERATION'S
PRESCRIBED NUCLEAR FACILITIES RESULTING FROM
CHANGES IN STATION END-OF-LIFE DATES**

Attached please find an Application by Ontario Power Generation Inc. ("OPG") for an accounting order to establish a deferral account to record, from January 1, 2018 until the effective date of the OEB's next payment amounts order, the revenue requirement impact of changes to nuclear liabilities and depreciation and amortization expense resulting from changes to station end-of-life ("EOL") dates for OPG's Pickering prescribed nuclear facilities that will be effective December 31, 2017.

This Application is in response to the findings in the OEB's recently issued EB-2016-0152 Decision and Order, which maintained certain requirements for accounting order applications established in the OEB's EB-2012-0002 and EB-2013-0321 decisions and orders. These decisions and orders establish that OPG will apply for an accounting order if there are material changes to its nuclear station service life estimates that are

not otherwise reflected in payment amounts or an authorized deferral or variance account. This Application is consistent with OPG's EB-2015-0374 application for a similar accounting order and reflects the OEB's findings in the EB-2015-0374 Decision and Order establishing the requested deferral account in that proceeding.

OPG expects that the ultimate balance in the proposed deferral account, as well as the timing and manner of its disposition, will be reviewed as part of a future OPG application. Accordingly, there is no rate impact at this time from this Application.

Consistent with the OEB's prior directions, OPG has provided notice to intervenors of record in EB-2012-0002, EB-2013-0321, EB-2015-0374 and EB-2016-0152.

OPG is also submitting this application on the Regulatory Electronic Submission System.

Best Regards,

[Original signed by]

Brenda MacDonald
Vice President, Regulatory Affairs
Ontario Power Generation

Attach.

cc: John Beauchamp (OPG) via e-mail
Charles Keizer (Torys) via e-mail
EB-2016-0152 Intervenors via e-mail
EB-2015-0374 Intervenors via e-mail
EB-2013-0321 Intervenors via e-mail
EB-2012-0002 Intervenors via e-mail

ONTARIO ENERGY BOARD

IN THE MATTER OF the *Ontario Energy Board Act, 1998*, S. O. 1998, c. 15, Schedule B;

AND IN THE MATTER OF an Application by Ontario Power Generation Inc. pursuant to section 78.1 of the *Ontario Energy Board Act, 1998* for an Order or Orders determining payment amounts for the output of certain of its generating facilities.

APPLICATION FOR AN ACCOUNTING ORDER ESTABLISHING A DEFERRAL ACCOUNT TO CAPTURE THE REVENUE REQUIREMENT IMPACT ON OPG'S PRESCRIBED NUCLEAR FACILITIES RESULTING FROM CHANGES IN STATION END-OF-LIFE DATES

1. OPG has determined that it will change, for accounting purposes, the current end-of-life ("EOL") date for its Pickering nuclear facilities, effective December 31, 2017, to December 31, 2022 for Units 1 and 4 and December 31, 2024 for Units 5 to 8. This change will impact the depreciation and amortization expense associated with the net book values of assets of the Pickering nuclear facilities. The change also will be reflected through a change in OPG's accounting obligation (i.e. asset retirement obligation) and associated costs for nuclear decommissioning and nuclear waste management liabilities ("nuclear liabilities"). OPG's 2017 audited annual financial statements will record the related adjustment to the asset retirement obligation as of December 31, 2017.
2. The above changes will have material revenue requirement impacts beginning January 1, 2018.
3. OPG filed an application (EB-2016-0152) with the Ontario Energy Board ("OEB") under section 78.1 of the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15 (Schedule B) seeking approval for payment amounts for generating facilities prescribed under

Ontario Regulation 53/05 (“O. Reg. 53/05”). The OEB issued its Decision and Order on the application on December 28, 2017.

4. The EB-2016-0152 Decision and Order determined, among other things, that 2017-2021 operating cost¹ and generation impacts associated with the continued operation of Pickering beyond 2020² will be included the 2017-2021 revenue requirements for the prescribed nuclear facilities. The Decision and Order also accepted OPG’s proposal that these revenue requirements reflect nuclear liabilities costs and depreciation and amortization expense on the basis of the existing Pickering EOL date of December 31, 2020 for accounting purposes, subject to a continuing obligation on OPG to file an application for an accounting order when it proposes to effect a change in the station lives of its prescribed nuclear facilities.³ This Application is in response to the findings in the EB-2016-0152 Decision and Order.
5. The EB-2016-0152 Decision and Order recognized OPG’s continuing requirement to apply for an accounting order if there are material changes to service life estimates as set out in the OEB’s EB-2012-0002 and EB-2013-0321 decisions and orders.⁴ Specifically, the EB-2012-0002 and EB-2013-0321 decisions and orders require an application for an accounting order if:
 - i. OPG proposes an accounting change impacting the calculation of its nuclear liabilities, other than as a result of an Ontario Nuclear Funds Agreement (“ONFA”) Reference Plan update, which results in a revenue requirement impact for the prescribed facilities⁵; or

¹ EB-2016-0152 Decision and Order, pp. 52-68

² EB-2016-0152 Decision and Order, pp. 12-13

³ EB-2016-0152 Decision and Order, pp. 67-68

⁴ EB-2016-0152 Decision and Order, p. 86

⁵ EB-2013-0321 Decision, p. 127; requirement was originally established in the EB-2012-0002 Payment Amounts Order (p. 7)

- ii. OPG proposes to change the EOL dates of its prescribed nuclear facilities, for depreciation and amortization purposes, which results in a non-Asset Retirement Cost (“ARC”) revenue requirement impact⁶.
6. The EB-2012-0002 and EB-2013-0321 decisions and orders state that an accounting order application is only required if the revenue requirement impact in question is neither reflected in current or proposed payment amounts nor recorded in an authorized deferral or variance account, and the annualized revenue requirement impact for the prescribed facilities is \$10M or greater.
7. The revenue requirement impact resulting from the above changes is not reflected in either the current payment amounts or the payment amounts expected to be approved in the EB-2016-0152 Payment Amount Order. OPG proposes that none of the revenue requirement impact be recorded in the Nuclear Liability Deferral Account (or any other authorized deferral or variance account).
8. The financial impact of the December 31, 2017 change in the asset retirement obligation and associated costs for the Bruce facilities, determined in accordance with US GAAP, will be reflected in the Bruce Lease Net Revenues Variance Account in accordance with the EB-2016-0152 Decision and Order and the EB-2016-0152 Payment Amounts Order and is therefore not subject to this Application.
9. As was the case in EB-2015-0374, OPG is not able to provide the annual revenue requirement impact associated with the above noted changes at this time, primarily because final year-end information required to calculate the December 31, 2017 adjustment to the asset retirement obligation is not yet available. OPG will determine the asset retirement obligation adjustment in conjunction with other adjustments necessary to finalize OPG's 2017 annual financial statements. However, based on preliminary estimates and as directionally illustrated in paragraph 11 below, OPG expects that the annual revenue requirement impact will be a credit to ratepayers in excess of the \$10M annual materiality threshold.

⁶ EB-2013-0321 Payment Amounts Order, pp. 9-10

10. OPG requests the OEB's approval to establish a deferral account to record the revenue requirement impact on the prescribed facilities arising from changes to nuclear liabilities on December 31, 2017 and depreciation and amortization expense beginning January 1, 2018 resulting from changes to Pickering EOL dates. The nuclear liabilities impact will be determined in accordance with the methodology approved by the OEB for determining the revenue requirement impacts of nuclear liabilities for OPG, as originally established in the EB-2007-0905 Decision with Reasons and most recently confirmed in the EB-2016-0152 Decision and Order.⁷
11. Subject to the impact of the December 31, 2017 asset retirement obligation adjustment, OPG proposes that the revenue requirement impact recorded in the proposed deferral account be based on forecast 2018 opening gross plant and accumulated depreciation and amortization amount and forecast 2018-2021 capital in-service additions included in nuclear rate base values that will be approved through the EB-2016-0152 Payment Amounts Order. Using corresponding values proposed in OPG's pre-filed evidence from the EB-2016-0152 application, OPG illustratively estimates that depreciation and amortization expense (both ARC and non-ARC) would decrease by approximately \$150M in 2018, \$150M in 2019, and \$155M in 2020, partially offset by an increase of approximately \$95M in 2021, for a net decrease of approximately \$360M over the period.⁸
12. The above impacts are illustrative as they do not reflect adjustments to OPG's proposed capital in-service additions and nuclear rate base values resulting from the OEB's findings in the EB-2016-0152 Decision and Order, which OPG will reflect in the draft Payment Amounts Order submission, or the anticipated year-end 2017 change to the asset retirement obligation and corresponding ARC balances, which will be finalized as part of OPG's 2017 financial year close process and reflected in the 2017

⁷ EB-2016-0152 Decision and Order, pp. 96-97

⁸ Given the magnitude and illustrative nature of the estimates, consequential impacts on cost of capital and income tax components of the revenue requirement have not been included, but would be captured in the actual revenue requirement impact recorded in the proposed deferral account. The non-ARC cost of capital component will be calculated using the OEB-approved capital structure and cost of capital rates that will be reflected in the EB-2016-0152 Payment Amounts Order.

audited annual financial statements. Both of these impacts will be captured in the calculation of the actual revenue requirement impact recorded in the deferral account.

13. The deferral account is proposed to record the revenue requirement impact effective January 1, 2018 until the effective date of the OEB's next nuclear payment amounts order incorporating the above impacts into OPG's payment amounts.
14. As the revenue requirement impact commences January 1, 2018, OPG requests that the OEB issue an interim order effective January 1, 2018, approving the establishment of the requested deferral account on an interim basis. This will permit the above revenue requirement impacts to be recorded in a deferral account pending the OEB's final order in respect of this Application.
15. OPG expects that information supporting the balance in the proposed account, as well as the timing and manner of its disposition, would be reviewed in a future OPG application. Accordingly, there is no rate impact at this time from this Application.
16. As there is no immediate rate impact, OPG requests that this Application proceed by way of a written hearing.
17. The Application will be supported by written evidence, as required. The written evidence filed by OPG may be supplemented or amended from time to time by OPG prior to the OEB's final decision on the Application.
18. OPG further applies to the OEB pursuant to the provisions of the Act and the OEB Rules of Practice and Procedure for such orders and directions as may be necessary in relation to the Application and the proper conduct of this proceeding.
19. The persons affected by this Application are all electricity consumers in Ontario. It is impractical to set out the names and addresses of the consumers because they are too numerous. However, consistent with the OEB's prior directions, OPG has provided notice to intervenors of record in EB-2012-0002, EB-2013-0321, EB-2015-0374 and EB-2016-0152.

20. OPG requests that copies of all documents filed with the OEB by each party to this Application along with copies of all comments filed with the OEB in accordance with Rule 24 of the OEB Rules of Practice and Procedure be served on the applicant and the applicant's counsel as follows:

a) The Applicant
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Dated at Toronto, Ontario, this 29th day of December, 2017:

[Original signed by]

Brenda MacDonald
Vice President, Regulatory Affairs

1.0 BACKGROUND

OPG filed an application (EB-2016-0152) with the OEB under section 78.1 of the *Ontario Energy Board Act, 1998, S.O. 1998, c. 15 (Schedule B)* seeking approval for payment amounts for generating facilities prescribed under *Ontario Regulation 53/05* (“O. Reg. 53/05”). The OEB issued its Decision and Order on the application on December 28, 2017. The EB-2016-0152 Payment Amounts Order will establish, among other things, nuclear payment amounts effective June 1, 2017 that are expected to continue until OPG’s next application for nuclear payment amounts.

OPG’s EB-2016-0152 application proposed and the Decision and Order accepted that the revenue requirements for the prescribed nuclear facilities will reflect OPG’s nuclear liabilities costs and depreciation and amortization expense on the basis of the existing Pickering EOL dates for accounting purposes of December 31, 2020 for Units 1 and 4 and Units 5 to 8, subject to a continuing obligation on OPG to file an application for an accounting order when it proposes to effect a change in the station lives of its prescribed nuclear facilities.⁹ The Decision and Order also accepted that 2017-2021 operating cost¹⁰ and nuclear generation impacts associated with the continued operation of Pickering beyond 2020 will be included in the 2017-2021 revenue requirements for the prescribed nuclear facilities.¹¹

OPG’s evidence in EB-2016-0152 was that it was undertaking a set of initiatives to extend Pickering operation beyond 2020 and that the December 31, 2020 accounting EOL was expected to be reassessed when further technical work confirmed, with the necessary high confidence, the units’ ability to operate beyond 2020, recognizing that approval by the Canadian Nuclear Safety Commission (“CNSC”) is required.

The existing December 31, 2020 EOL date for Pickering Units 5 to 8 was adopted effective December 31, 2015, based on OPG achieving high confidence that the units would be technically fit to operate until at least the end of 2020. Effective January 1, 2016

⁹ EB-2016-0152 Decision and Order, pp. 67-68

¹⁰ EB-2016-0152 Decision and Order, pp. 52-68

¹¹ EB-2016-0152 Decision and Order, pp 12-13

and pending the effective date of the EB-2016-0152 payment amounts, the prescribed facilities' revenue requirement impact on the nuclear liabilities and depreciation and amortization expense associated with the December 31, 2015 change in the Pickering Units 5-8 EOL date (as well as the change in EOL dates for OPG's other nuclear stations adopted at the same time) was being recorded in the Impact Resulting from Changes in Station End-of-Life Dates (December 31, 2015) Deferral Account established by the OEB pursuant to OPG's EB-2015-0374 accounting order application.

The EB-2016-0152 Decision and Order recognized OPG's continuing requirement to apply for an accounting order if there are material changes to service life estimates as set out in the OEB's EB-2012-0002 and EB-2013-0321 decisions and orders.¹² Pursuant to the OEB's EB-2012-0002 and EB-2013-0321 decisions and orders, an application for an accounting order is required if:

- (i) OPG proposes an accounting change impacting the calculation of its nuclear liabilities, other than as a result of an ONFA Reference Plan update, which results in a revenue requirement impact for the prescribed facilities;¹³ or
- (ii) OPG proposes to change the EOL dates of its prescribed nuclear facilities for depreciation and amortization purposes that results in a non-ARC revenue requirement impact¹⁴.

The EB-2012-0002 and EB-2013-0321 decisions and orders state that an accounting order application is only required if the revenue requirement impact is neither reflected in current or proposed payment amounts nor recorded in an authorized deferral or variance account, and the annualized revenue requirement impact for the prescribed facilities is \$10M or greater.

¹² EB-2016-0152 Decision and Order, p. 86

¹³ EB-2013-0321 Decision, p. 127; requirement was originally established in the EB-2012-0002 Payment Amounts Order (page 7)

¹⁴ EB-2013-0321 Payment Amounts Order, pp. 9-10

2.0 CHANGES IN NUCLEAR STATION END-OF-LIFE DATES

There are changes to the EOL dates, for accounting purposes, for the Pickering nuclear station. The change to the EOL dates will be implemented effective December 31, 2017 through adjustments to OPG's nuclear Asset Retirement Obligation ("ARO") and Asset Retirement Costs ("ARC") balances and will be reflected in depreciation and amortization expense beginning January 1, 2018.

Specifically, OPG has achieved high confidence, as described below, that Pickering Units 1 and 4 are expected to operate until December 31, 2022 and Pickering Units 5 to 8 to operate until December 31, 2024 and is adopting these dates as the EOL dates for accounting purposes, effective December 31, 2017. The revised EOL dates are consistent with the planning assumptions underpinning OPG's forecasts of operating costs and generation forecasts for the 2017-2021 period approved by the OEB in the EB-2016-0152 Decision and Order.

The change in the Pickering EOL dates reflects OPG's high technical confidence that the units can safely operate to the above noted dates based on the programs and provisions in place to assure fitness-for-service of fuel channel components. The work program to support fitness-for-service of fuel channels includes the Fuel Channel Life Assurance project ("FCLA") to address the elongation of the fuel channels, which is considered to be the specific life-limiting degradation mechanism that could impact station operations beyond 2020. Based on the results of the FCLA, completed earlier in 2017, OPG has recently selected a strategy to manage fuel channel elongation and has incorporated it into the life cycle management plans.

The above noted technical high confidence is consistent with the safety case reflected in OPG's power reactor operating license application for the Pickering station submitted to the CNSC in August 2017. The application seeks a ten-year license renewal to August 31, 2028, which would span the planned remaining commercial operations period to 2024, through the planned period to place the station in a safe store state. In support of the license renewal, OPG has completed a Periodic Safety Review (PSR), a comprehensive assessment of the station's design and operation to confirm that there is a high level of

safety throughout the operating life and to determine what reasonable and practical enhancements can be made to further improve safety. The Pickering PSR also includes a component condition assessment of the station to identify the work required to support the continued operation of the station. The Pickering PSR has confirmed that extending station operation to 2024 will continue to pose minimal risk to the health, safety and security of workers, the public and the environment. The final major element of the PSR was completed and submitted to the CNSC in November 2017.

The CNSC review of OPG's PSR submission and license application is underway and a decision will be rendered about August of 2018 after public hearings scheduled in April and June of 2018. While public hearings have not yet occurred, OPG has taken steps to be in a good position to achieve a successful license renewal. Namely, OPG has demonstrated a strong record of operational safety; achieved a CNSC integrated plant rating of fully satisfactory (the highest safety rating possible) over the last two years; has programs in place to support the provision of safe and reliable service; and completed the PSR process, including component condition assessments to ensure that the major plant components have sufficient life to operate through the end of 2024, as well as an assessment against modern codes and standards.

3.0 REVENUE REQUIREMENT IMPACTS AND MATERIALITY

The revenue requirement impact arises from changes in depreciation and amortization expense for non-ARC and existing ARC asset balances, as well as from the anticipated changes in the ARO (and associated ARC) at December 31, 2017. As was the case in EB-2015-0374, OPG is not able to provide the total annual revenue requirement impact associated with these changes at this time, primarily because final year-end information required to calculate the December 31, 2017 ARO adjustment is not yet available. However, based on preliminary estimates and as directionally illustrated below, OPG expects that the total annual revenue requirement impact will be a credit to ratepayers in excess of the \$10M annual materiality threshold for filing this accounting order application.

Subject to the impact of the December 31, 2017 ARO/ARC adjustment, OPG proposes that the revenue requirement impact be based on forecast 2018 opening gross plant and accumulated depreciation and amortization amounts and forecast 2018-2021 capital in-service additions included in nuclear rate base values that will be approved through the EB-2016-0152 Payment Amounts Order. That is, OPG would recalculate the OEB-approved nuclear rate base and depreciation and amortization expense for the 2018-2021 period by applying the revised Pickering EOL dates to these values effective January 1, 2018, holding all other variables constant. Using corresponding values from OPG's pre-filed evidence in the EB-2016-0152 application, OPG illustratively estimates that this would decrease depreciation and amortization expense (both ARC and non-ARC) by approximately \$150M in 2018, \$150M in 2019, and \$155M in 2020, partially offset by an increase of approximately \$95M in 2021, for a net decrease of approximately \$360M over the period.¹⁵

The above impacts are illustrative as they do not reflect adjustments to OPG's proposed in-service capital additions and nuclear rate base values resulting from the OEB's findings in the EB-2016-0152 Decision and Order, which OPG will reflect in the draft Payment Amounts Order submission, or the anticipated year-end 2017 change to the ARO and ARC balances, which will be reflected in OPG's 2017 audited annual financial statements. Both of these impacts will be captured in the calculation of the actual revenue requirement impact recorded in the deferral account.

As in EB-2015-0374, a substantial amount of work, based on actual year-end information (including the actual unadjusted ARO balance and discount rate for calculating the ARO change), is required to determine the exact December 31, 2017 ARO and ARC adjustments reflecting the above EOL date changes. Once these adjustments have been finalized as part of OPG's 2017 financial year close process, the revenue requirement impacts beginning in 2018 can be determined. The nuclear liabilities impact will be

¹⁵ Given the illustrative nature of the estimates, consequential impacts on cost of capital and income tax components of the revenue requirement have not been included, but would be captured in the actual revenue requirement impact calculations. The non-ARC cost of capital component will be calculated using the OEB-approved capital structure and cost of capital rates that will be reflected in the EB-2016-0152 Payment Amounts Order.

determined in accordance with the methodology originally approved by the OEB in the EB-2007-0905 Decision with Reason and as most recently confirmed in the EB-2016-0152 Decision and Order.¹⁶

Information required to support the revenue requirement impact will be filed as part of an OPG application to dispose of the balance in the proposed deferral account, discussed below, or as part of normal filing requirements in OPG's next payment amounts application, whichever is earlier. This will include evidence specifically addressing the impact of changes in the nuclear liabilities, as similarly provided in a number of previous OPG proceedings. The accuracy of the amounts recorded in the proposed deferral account will be subject to review in a future application as part of any proposed disposition of the account balance.

As certain costs associated with the nuclear liabilities are, by their nature, shared across the nuclear fleet, changes in lifecycle used fuel and waste volumes resulting from changes to a particular station EOL date typically impact the ARO and ARC for all of OPG's nuclear stations. As such, changes to the Pickering EOL dates are expected to impact the ARO and ARC for the Bruce facilities. The financial impact of any such changes for the Bruce facilities, determined in accordance with US GAAP, will be recorded in the Bruce Lease Net Revenues Variance Account in accordance with the EB-2016-0152 Decision and Order and EB-2016-0152 Payment Amounts Order and therefore is not subject to this Application.

4.0 NEW DEFERRAL ACCOUNT

OPG requests the OEB's approval to establish a new deferral account to record the revenue requirement impact on the prescribed facilities arising from changes to the nuclear liabilities on December 31, 2017 and changes to depreciation and amortization expense beginning January 1, 2018 resulting from changes to the EOL dates for the Pickering station as outlined in Section 2.0.

¹⁶ EB-2016-0152 Decision and Order, pp. 96 and 97

4.1 Justification

This Application is being filed pursuant to the EB-2012-0002, EB-2013-0321 and EB-2016-0152 decisions and orders, as the changes at the end of 2017:

- (i) will result in a revenue requirement impact for the prescribed facilities beginning January 1, 2018 that will not be reflected in the 2018 onwards payment amounts that will be established by the EB-2016-0152 Payment Amount Order (and is not reflected in the existing payment amounts in effect until that time);
- (ii) will result in an annualized revenue requirement impact for the prescribed facilities that is expected to be higher than the \$10M materiality threshold; and
- (iii) will not be recorded in a previously authorized deferral or variance account, including the Nuclear Liability Deferral Account, as proposed by OPG.¹⁷

OPG is making the change in the Pickering EOL dates for accounting purposes because it has achieved the necessary high confidence that the station will operate to these dates. As discussed in Section 2.0, OPG has achieved this high confidence from a number of activities that took place during the 2017 year. The revised dates are consistent with the planning assumptions underpinning OEB-approved forecasts of operating costs and generation for the prescribed nuclear facilities for the 2017-2021 period and represent OPG's current best estimate of the expected period of operation for the station. OPG will

¹⁷ The change in the nuclear liabilities resulting from the revised Pickering EOL dates will implement, for accounting purposes, the Pickering end-of-life assumptions reflected in the approved 2017-2021 ONFA Reference Plan. As such, the nuclear liabilities revenue requirement impact arising from the Pickering end-of-life change would be eligible for recording in the Nuclear Liability Deferral Account. The non-ARC revenue requirement impact of the Pickering EOL date change is not eligible to be recorded in the Nuclear Liability Deferral Account (or any other authorized deferral or variance account) and would therefore require an accounting order application in any event. For greater transparency and regulatory efficiency, OPG proposes that both the nuclear liabilities and the non-ARC depreciation and amortization revenue requirement impact be recorded in a single, new deferral account, to be considered as part of this Application.

be making the associated change to the December 31, 2017 nuclear ARO and ARC balances in order to fairly present its financial statements in accordance with US GAAP.

4.2 Account Operation and Reporting

OPG proposes that the deferral account shall record the revenue requirement impact on OPG's prescribed nuclear facilities as outlined in this Application. As the change in the Pickering station life and ARO and ARC balances will be effective December 31, 2017, the corresponding revenue requirement impact will begin on January 1, 2018. Therefore, OPG proposes to record the revenue requirement impact effective January 1, 2018 until new payment amounts incorporating these impacts come into effect. To enable the recording of the revenue requirement effective January 1, 2018, OPG requests that the OEB establish the proposed deferral account effective January 1, 2018 on an interim basis pending the outcome of this Application.

The proposed deferral account would operate similarly to the Impact Resulting from Changes in Station End-of-Life Dates (December 31, 2015) Deferral Account established in EB-2015-0374. Illustrative accounting order and account entries for the proposed deferral account are provided in Appendix A. The account would not record amounts otherwise recorded in another authorized deferral or variance account. OPG proposes that the description of deferral account mechanics and deferral account entries apply equally and consistently during the period of the interim approval.

Similar to the Impact Resulting from Changes in Station End-of-Life Dates (December 31, 2015) Deferral Account, OPG proposes that no interest be recorded on the balance of the new deferral account.

If the proposed account is approved, OPG would file its balance in conjunction with its regular reporting on other variance and deferral accounts approved by the OEB.

4.3 OPG's Future Applications

OPG will provide a proposal for the disposition of amounts recorded in the new deferral account in a future application. As part of that application, OPG will also provide detailed

information to support amounts recorded in the account. The account balance will be included in the audit of OPG's deferral and variance account balances.

As part of the next nuclear payment amounts application, subject to the OEB's filing guidelines, OPG also expects to continue to provide information with respect to its nuclear liabilities, separately for the prescribed and Bruce facilities and in the format consistent with EB-2016-0152, Ex. C2-1-1 Tables 1 to 5.

OPG acknowledges that establishment of the proposed deferral account does not constitute approval of the balance that will be recorded in this account and that parties will have the opportunity to review and test the evidence filed in a future OPG application regarding the actual entries and deferral account balance.

**Illustrative Accounting Order
Ontario Power Generation Inc.
EB-2018-0002**

Impact Resulting from Changes to Pickering Station End-of-Life Dates (December 31, 2017) Deferral Account

OPG shall establish this new account, effective January 1, 2018, to record the revenue requirement impact arising from changes to nuclear liabilities and depreciation and amortization expense resulting from changes to station end-of-life dates for the Pickering prescribed nuclear facilities that are effective December 31, 2017.

Entry 1: Nuclear liability revenue requirement for prescribed facilities

<u>Entry</u>	<u>Debit</u>	<u>Credit</u>
DR/CR Depreciation Expense	x,xxx	x,xxx
DR/CR Return on Rate Base	x,xxx	x,xxx
DR/CR Income Tax Expense	x,xxx	x,xxx
DR/CR Used Fuel Storage and Disposal Variable Expense	x,xxx	x,xxx
DR/CR Low & Intermediate Level Waste Management Variable Expense	x,xxx	x,xxx
CR/DR Impact Resulting from Changes in Pickering Station End-of-Life Dates (December 31, 2017) Deferral Account ¹⁸	x,xxx	x,xxx

To record the impact on nuclear liabilities costs resulting from changes in end-of-life dates on Asset Retirement Cost (“ARC”) depreciation, the associated impacts on the return on rate base and variable used fuel and waste management expenses, and the tax impact of the settlement with customers of the net amount.

¹⁸ The entry is expected to be a net debit in 2021 reflecting a higher Pickering ARC depreciation expense to be recovered from ratepayers in that year based on the extended life to 2022/2024, compared to nil ARC depreciation included in the EB-2016-0152 revenue requirement for 2021 based on December 31, 2020 end-of-life.

Entry 2: Non-ARC revenue requirement impact for prescribed facilities

<u>Entry</u>	<u>Debit</u>	<u>Credit</u>
DR/CR Depreciation Expense	x,xxx	x,xxx
DR/CR Income Tax Expense	x,xxx	x,xxx
CR Return on Rate Base		x,xxx
CR/DR Impact Resulting from Changes in Pickering Station End-of-Life Dates (December 31, 2017) Deferral Account ¹⁹	x,xxx	x,xxx

To record the impact of the change in nuclear station lives on non-ARC depreciation expense, the associated impact on the return on net rate base through the change in accumulated depreciation, and the tax impact of the settlement with customers of the net amount.

OPG shall not record interest on the balance of this account.

OPG shall file the balance in the Impact Resulting from Changes in Pickering Station End-of-Life Dates (December 31, 2017) Deferral Account in conjunction with its regular reporting on other deferral and variance accounts approved by the OEB.

The account entries will continue until the effective date of the next payment amounts order incorporating the corresponding changes to the Pickering station end-life dates in nuclear payment amounts.

¹⁹ The entry is expected to be a net credit in 2018-2020 reflecting a lower non-ARC depreciation expense as a result of extending the Pickering EOL from 2020 to 2022/2024. The entry is expected to be a net debit in 2021 reflecting a higher Pickering non-ARC depreciation expense to be recovered from ratepayers in that year based on the extended life to 2022/2024, compared to the assumed non-ARC depreciation amount included in the EB-2016-0152 revenue requirement for 2021 that was set to equal forecast Pickering in-service additions in that year.