

1 **NUCLEAR WASTE MANAGEMENT AND**
2 **DECOMMISSIONING – REVENUE REQUIREMENT IMPACT**
3 **OF NUCLEAR LIABILITIES**

4
5 **1.0 PURPOSE**

6 This evidence describes the basis and the OEB-approved revenue requirement treatment of
7 OPG’s liabilities for nuclear waste management and decommissioning (“nuclear liabilities”),
8 presents the forecast amounts of nuclear liabilities costs included in the proposed IR term
9 nuclear revenue requirements, and outlines OPG’s proposed treatment of the nuclear liabilities
10 that are expected to arise during the IR term in respect of the Darlington New Nuclear Program
11 (“DNNP”) facilities.

12
13 **2.0 OVERVIEW**

14 The Application is seeking recovery of \$1,561.8M, after-tax, over the IR term in respect of
15 nuclear liabilities, with \$479.4M for OPG’s prescribed facilities and \$1,082.4M for the Bruce
16 facilities. These amounts were determined using the same methodologies as approved by the
17 OEB in EB-2020-0290 and all prior payment amounts proceedings and reflect the 2022 Ontario
18 Nuclear Funds Agreement (“ONFA”) Reference Plan effective January 1, 2022 (the “2022
19 ONFA Reference Plan”) and its attendant contribution schedule (the “2022 ONFA Contribution
20 Schedule”), both as approved by the Province of Ontario since EB-2020-0290.

21
22 With respect to OPG’s prescribed facilities, the Application is seeking recovery of the following
23 annual amounts: \$51.9M in 2027, \$82.8M in 2028, \$107.8M in 2029, \$117.0M in 2030, and
24 \$119.8M in 2031 (Ex. C2-1-1, Table 1, line 8). These amounts represent a reduction compared
25 to the 2020-2024 historical years, primarily due to the depreciation of asset retirement costs
26 (“ARC”) for Pickering Units 1 and 4 in line with the end of their useful life in 2024 and a slower
27 rate of depreciation of ARC for Pickering Units 5-8 due to the extension of their accounting
28 useful life to reflect their upcoming refurbishment, as discussed below. The increase in the
29 annual amounts for recovery during the IR term includes the impact of the management of the
30 incremental low and intermediate level waste (“L&ILW”) expected to be generated in the course

1 of the Pickering Refurbishment Program (“PRP”) and the incremental used fuel expenses that
2 will be recognized upon new fuel being loaded into the Pickering reactors as part of the
3 refurbishment.

4
5 With respect to the Bruce facilities, the recovery amounts sought comprise (i) a reduction to
6 Bruce Lease net revenues, and (ii) through the impact of Bruce Lease net revenues on
7 regulatory earnings before tax for OPG’s prescribed facilities, associated regulatory income
8 tax impacts. The annual Bruce Lease net revenues reductions are as follows: \$163.7M in 2027,
9 \$158.8M in 2028, \$163.4M in 2029, \$159.9M in 2030, and \$166.0M in 2031 (Ex. C2-1-1, Table
10 1, line 15). The associated annual regulatory income tax impacts are as follows: \$54.6M in
11 2027, \$52.9M in 2028, \$54.5M in 2029, \$53.3M in 2030, and \$55.3M in 2031 (Ex. C2-1-1,
12 Table 1, line 16). The above amounts are comparable to those for the 2020-2024 historical
13 years.

14
15 The evidence also presents the nuclear liabilities’ impacts for OPG’s prescribed facilities and
16 the Bruce facilities for 2020-2024 (actual) and 2025-2026 (budget).

17
18 OPG will be responsible for the nuclear waste management and decommissioning obligations
19 arising for the DNNP facilities. Ontario Regulation 53/05 (“O. Reg. 53/05”) requires the OEB to
20 ensure that OPG recovers all the costs it incurs in relation to its nuclear liabilities with respect
21 to the DNNP facilities as they are reflected in OPG’s audited financial statements. Pursuant to
22 the regulation, the Application proposes to establish a new deferral account to record the
23 difference between the nuclear liabilities costs in respect of the DNNP facilities reflected in
24 OPG’s nuclear revenue requirement approved by the OEB and such actual nuclear liabilities
25 costs as reflected in OPG’s audited financial statements. This will result in the nuclear liabilities
26 costs for the DNNP facilities being recovered using the same methodology that the OEB has
27 approved for the Bruce facilities. The Application does not reflect any such amounts in the
28 proposed IR term nuclear revenue requirements. The Application proposes that such costs
29 incurred during the IR term be recorded in the new deferral account, which recording would
30 commence once the nuclear liabilities are recognized in OPG’s financial statements.

1 While the 2027-2031 ONFA Reference Plan (the “2027 ONFA Reference Plan”) is under
2 development and has not been reflected in the proposed recovery amounts sought with respect
3 to the nuclear liabilities, the proposed amounts reflect the accounting impact of the extension
4 of the station end-of-life (“EOL”) date for Pickering Units 5-8 to 2070, including the associated
5 nuclear liabilities adjustment recognized as of year-end 2023 in accordance with US GAAP.
6 As discussed in Ex. F4-1-1, Section 3.5, the EOL date extension reflected OPG’s expectations
7 of the refurbishment of these units, given the Province’s announced support for
8 for OPG’s plan to proceed with the initiation phase of the PRP.

9
10 These changes are estimated to increase the recovery amounts for the prescribed facilities by
11 approximately \$40M and reduce the recovery amounts for the Bruce facilities by approximately
12 \$280M in aggregate over the IR term (Ex. C2-1-1, Table 5, Column (k)). OPG anticipates that
13 the refurbishment and its corresponding useful life extension for Pickering Units 5-8 will be
14 incorporated into the approved 2027 ONFA Reference Plan. As this change was not
15 contemplated in the setting of the EB-2020-0290 payments amounts (and is not yet reflected
16 in the current approved ONFA Reference Plan), the associated prescribed facilities’ revenue
17 requirement impact is being recorded in the Impact Resulting from Optimization of Pickering
18 Station End-of-Life Dates Deferral Account since 2024. This will continue until the effective
19 date of the next payment amounts order incorporating these changes in the nuclear payment
20 amounts (Ex. H1-1-1, Section 5.23).

21
22 The revenue requirement impact on OPG’s prescribed facilities from any changes in the
23 nuclear liabilities arising from the approved 2027 ONFA Reference Plan, measured against
24 amounts reflected in approved payment amounts, will be subject to the Nuclear Liability
25 Deferral Account. Any changes in the nuclear liabilities costs for the Bruce facilities from those
26 reflected in approved payment amounts continue to be subject to the Bruce Lease Net
27 Revenues Variance Account.

28
29 Pursuant to the EB-2020-0290 Payment Amounts Order and similar provisions of prior
30 payment amounts orders, OPG has been required to file an accounting order application with

1 the OEB to address (i) a proposed accounting change impacting the nuclear liabilities other
2 than as a result of an ONFA Reference Plan update or (ii) a change in the EOL dates for its
3 prescribed nuclear facilities for depreciation and amortization purposes, in either case to the
4 extent the resulting revenue requirement impact for OPG's prescribed facilities is \$10M or
5 greater on an annualized basis and is neither reflected in the current or proposed payment
6 amounts nor recorded in an deferral or variance account. The Application proposes to continue
7 this requirement for the IR term, subject to increasing the \$10M threshold to \$20M consistent
8 with the proposal to increase OPG's overall materiality threshold from \$10M to \$20M, as
9 discussed in Ex. A1-3-2, Section 4.3.

10

11 The remainder of this evidence is organized as follows:

- 12 • Section 3.0 provides background information on OPG's nuclear waste management and
13 decommissioning obligations, an overview of the ONFA, and financial accounting
14 requirements for nuclear liabilities and ONFA segregated funds in accordance with US
15 GAAP.
- 16 • Section 4.0 describes the OEB-approved methodologies for recovery of nuclear liabilities
17 for OPG's prescribed facilities and the Bruce facilities.
- 18 • Section 5.0 discusses main changes in the asset retirement obligation ("ARO"),
19 corresponding unamortized asset retirement costs ("ARC") and the segregated fund
20 balances set aside for discharging the nuclear liabilities for OPG's facilities in accordance
21 with the ONFA since EB-2020-0290. This includes the impacts of the nuclear liabilities
22 adjustments recorded as of year-end 2021 to reflect the approved 2022 ONFA Reference
23 Plan and as of year-end 2023 to reflect the extension of the accounting EOL date for
24 Pickering Units 5-8.
- 25 • Section 6.0 responds to the OEB's request that OPG explain its heavy water management
26 plan for end of commercial operation for Pickering units.
- 27 • Section 7.0 provides the status of the 2027 ONFA Reference Plan.
- 28 • Section 8.0 outlines OPG's proposed treatment of the nuclear liabilities costs that are
29 expected to arise during the IR term in respect of the DNNP facilities.

1 **3.0 BACKGROUND**

2 **3.1 Obligations for Nuclear Waste Management and Decommissioning**

3 OPG is responsible for the ongoing and long-term management of irradiated wastes, including
4 used nuclear fuel and less radioactive material, categorized as low level waste and
5 intermediate level waste (“ILW”), generated over the life of its nuclear facilities, and for the
6 decommissioning of its nuclear generating and waste management facilities at the end of their
7 useful lives. These obligations are tracked by the following five programs:

- 8 • Decommissioning – OPG’s nuclear station decommissioning plans for the existing facilities
9 consist of preparation and placement of stations into a safe state condition at the end of
10 their useful lives, including removal of fuel and heavy water from the reactors, followed by
11 an assumed period for safe storage and subsequent station dismantlement and site
12 restoration. This includes the current ongoing work to place Pickering Units 1 and 4 into a
13 safe state condition following their end of commercial operation in the fourth quarter of
14 2024.
- 15 • Used Fuel Storage – The program encompasses the interim storage of used nuclear fuel,
16 in dry storage containers after a cooling off period for the existing facilities, at nuclear
17 station sites prior to their long-term disposal.
- 18 • Used Fuel Disposal – The program encompasses the long-term management of used
19 nuclear fuel, which is based on the Adaptive Phased Management concept previously
20 accepted by the Government of Canada on the recommendation of the Nuclear Waste
21 Management Organization (“NWMO”) in response to the *Nuclear Fuel Waste Act*. The
22 NWMO is responsible for the design and implementation of Canada’s plan for the safe
23 long-term management of used nuclear fuel. The Adaptive Phased Management approach
24 includes the isolation and containment of used nuclear fuel in a central deep geologic
25 repository (“DGR”). The NWMO is funded by nuclear fuel waste owners in Canada,
26 including OPG.
- 27 • L&ILW Storage – The program includes the transportation, processing, and as necessary
28 interim storage, presently at the OPG-owned and operated Western Waste Management
29 Facility situated at the Bruce nuclear site, of the L&ILW generated at OPG’s sites during

1 and as applicable following the operation of the nuclear stations, prior to its long-term
2 disposal.

- 3 • L&ILW Disposal – The program encompasses the long-term management of the L&ILW
4 generated at OPG’s nuclear sites. Consistent with the Integrated Strategy for Radioactive
5 Waste prepared by the NWMO at the Federal Government’s request and subsequently
6 accepted by the Federal Government in 2023, OPG’s long-term disposal assumptions
7 entail the emplacement of low level waste in a future near-surface disposal facility and the
8 emplacement of ILW in a central DGR to be implemented by the NWMO.

9
10 OPG’s obligations include used nuclear fuel and L&ILW generated at the existing Bruce
11 stations and the decommissioning of the existing Bruce stations. OPG’s obligations will
12 similarly include used nuclear fuel and L&ILW generated at the DNNP facilities and the
13 decommissioning of the DNNP facilities.

14
15 OPG typically performs a comprehensive update of the cost estimates for its nuclear liabilities
16 every five years, through the ONFA Reference Plan update process outlined in Section 3.2.
17 The 2022 ONFA Reference Plan is the current approved ONFA Reference Plan and was
18 approved by the Province subsequent to the EB-2020-0290 proceeding. A copy of the letter
19 from the Province approving the 2022 ONFA Reference Plan is provided in Attachment 1.

20
21 While the DNNP facilities are not currently covered by the ONFA, OPG is planning to perform,
22 as applicable, comprehensive determinations or updates of the cost estimates for its nuclear
23 liabilities for the DNNP facilities through or in conjunction with the ONFA Reference Plan
24 update process. OPG’s accounting liabilities for these costs are expected to be reported in
25 OPG’s financial statements in the same manner as for OPG’s existing nuclear facilities. The
26 initial recognition of these liabilities in OPG’s financial statements, in connection with DNNP
27 Unit 1, is expected to be within the IR term.

28
29 Given the long-term duration of the nuclear liabilities’ programs and the evolving technology to
30 handle nuclear waste, there is inherent uncertainty surrounding the cost estimates and

1 economic indices underpinning the nuclear liabilities, which may increase or decrease
2 materially over time as plans, assumptions, methods, technology and requirements evolve and
3 economic conditions change.

4
5 In accordance with US GAAP, OPG recognizes an accounting obligation for its nuclear
6 liabilities on the balance sheet, known as an ARO. The ARO represents the present value of
7 the committed portion of the costs for OPG's nuclear liabilities. The committed costs include
8 the cost components of the above five nuclear waste management and decommissioning
9 programs that are considered to be fixed, as well as the lifetime variable costs for irradiated
10 waste generated to date. The baseline cost estimates underpinning the ARO are (for the
11 existing facilities) or are expected to be (for the DNNP facilities) those developed through or in
12 conjunction with the ONFA reference plan update process.

13
14 The initial value and each subsequent adjustment to the ARO are known as tranches. In
15 accordance with US GAAP, each tranche is calculated using a discount rate determined at the
16 time of the adjustment, as discussed below, and is not revalued for subsequent changes in the
17 discount rate.

18
19 The current ARO balance consists of 13 different tranches. The tranches represent the initial
20 ARO and each of the subsequent adjustments (in present value terms), with the latest tranche,
21 recorded at December 31, 2023, related to the year-end 2023 adjustment in connection with
22 the extension of the accounting EOL date for Pickering Units 5-8 (see Section 5.2).

23
24 Each of the ARO tranches increases over time due to accretion expense, which represents
25 growth in the present value of the obligation at the discount rate used to establish each tranche,
26 due to the passage of time. Accretion expense is recognized as a cost in OPG's income
27 statement in accordance with US GAAP.

1 In accordance with US GAAP, the discount rate for each ARO tranche is determined using a
2 credit adjusted risk-free rate¹ determined as of the date of the revision for each ARO
3 adjustment underpinned by an upward revision in the amount of undiscounted estimated cash
4 flows (for example, the year-end 2023 ARO adjustment), or the weighted average discount
5 rate of the existing tranches in the case of a downward revision in the amount of undiscounted
6 cash flows (for example, the year-end 2021 ARO adjustment). Accordingly, the December 31,
7 2023 tranche was calculated using a discount rate of 3.93% and the December 31, 2021
8 tranche was calculated using a discount rate of 4.87%.

9
10 An overall objective of the financial accounting treatment of the ARO is to reflect costs in the
11 periods they are incurred, by matching them to the benefits derived from the asset. The ARO
12 costs are typically capitalized as a component of property, plant and equipment (“PP&E”) on
13 the balance sheet and amortized over the useful life of the stations, in order to match the
14 incurrence of these costs to the generation output of the station. The capitalized costs are
15 known as asset retirement cost (“ARC”). As such, a change in the ARO as a result of changes
16 in baseline cost estimates from an approved ONFA Reference Plan or from a change in the
17 accounting estimate or assumptions typically result in an equal amount being recorded as an
18 increase or decrease to the PP&E balances for the corresponding stations, to be amortized,
19 like other capital costs, over their remaining useful lives. The amortization gives rise to
20 depreciation expense. The ARC is a component of the net book value of each of the Pickering,
21 Darlington and Bruce nuclear stations.² Under the OEB-approved nuclear liabilities recovery
22 methodology for OPG’s prescribed facilities discussed in Section 4.1, ARC is included in
23 OPG’s nuclear rate base, and associated depreciation expense is included in the total
24 depreciation and amortization expense. For a station that has reached the end of its useful life,
25 in accordance with US GAAP, amounts that would otherwise be recorded as a change in the
26 ARC are instead charged, in full, to the income statement in the period the ARO change is
27 recorded.

¹ The discount rate used by OPG is the Province of Ontario long-term bond yield rate.

² For continuities of PP&E and accumulated depreciation and amortization balances for the prescribed facilities over the 2020-2031 period, including ARC, see Ex. B3-3-1, Tables 1 and 2, and Ex. B3-4-1, Tables 1 and 2.

1 Quantities of used fuel and L&ILW produced over time give rise to incremental committed
2 costs, which are recorded as increases to the ARO. These costs, expressed in present value
3 terms, are known as used fuel variable and L&ILW variable expenses, and are charged to the
4 income statement as incurred, in the period the additional used fuel and L&ILW is generated³.
5 The variable expenses are recorded as an increase to the ARO, either as an increase to the
6 most recent tranche or as a separate tranche.⁴ They are included in the revenue requirement,
7 as incurred, under the OEB-approved nuclear liabilities recovery methodology for OPG's
8 prescribed facilities and the Bruce facilities.

9
10 OPG maintains a station-level continuity of the ARO balances. The ARO is attributed at the
11 station level for each of the five programs described above. For the Decommissioning and
12 Used Fuel Storage programs, the underlying cost estimates are prepared directly at the station
13 level, with individual estimates prepared for each station. The remaining programs involve
14 central facilities, with cost estimates prepared at the program level and allocated to individual
15 stations in proportion to the lifecycle waste volume estimates.⁵

16
17 Continuity schedules showing the opening, closing and average balances of the ARO and ARC
18 are provided in Ex. C2-1-1, Table 2 (for OPG's prescribed facilities) and Ex. C2-1-1, Table 3
19 (for the Bruce facilities).⁶

³ Used fuel is considered to be generated at the time it is loaded into the reactor, including the initial fuel loading for a refurbished unit.

⁴ As incremental variable expenses represent, by definition, increases in undiscounted cash flows underlying the ARO, they are calculated using a credit-adjusted risk-free rate as of the date of the latest ARO adjustment. This approach is followed irrespective of whether the latest ARO adjustment itself was calculated using a credit-adjusted risk-free rate or a weighted average discount rate of the existing tranches (i.e., depending on the direction of change in the underlying undiscounted cash flows). Therefore, when an ARO adjustment is calculated using a credit-adjusted risk-free rate, variable expenses recorded following that date are added to the same ARO adjustment tranche. When the latest ARO adjustment is calculated using a weighted average discount rate, such variable expenses form a separate tranche, as was the case for the variable expenses recorded during 2022 and 2023 that were calculated using a discount rate of 2.45%.

⁵ The allocation of central program costs across the nuclear fleet based on lifecycle waste volume estimates gives rise to circumstances where a change in the assumed operating life of one nuclear station results in changes to the nuclear liabilities of all stations (i.e., both the prescribed facilities and the Bruce facilities).

⁶ The average ARO and ARC balances are provided for OPG's prescribed facilities but not the Bruce facilities as these values are required to determine rate base values and the return on rate base used only in the approved recovery methodology for the prescribed facilities (see Sections 4.1 and 4.2).

1 **3.2 Ontario Nuclear Funds Agreement**

2 The ONFA, a bilateral agreement between OPG and the Province of Ontario (“Province”), sets
3 out OPG’s funding obligations for the long-term programs of lifecycle nuclear liabilities for its
4 existing facilities, through contributions to two segregated funds, the Decommissioning
5 Segregated Fund (“DF”) and the Used Fuel Segregated Fund (“UFF”) (collectively,
6 “segregated funds”).⁷ These funds are set aside in segregated accounts for the express
7 purpose of funding future expenditures on the underlying obligations. The Province established
8 the ONFA as a funding mechanism for OPG’s nuclear liabilities for the existing facilities
9 consistent with a growing trend in international jurisdictions at the time to place money aside
10 for the long-term management of nuclear liabilities, in recognition of the fact that these liabilities
11 will be discharged many years after the nuclear generating stations have closed. The ONFA
12 was executed in 2003, but it includes calculations and contributions effective as of OPG’s
13 inception in 1999. The ONFA does not currently include the DNNP facilities.

14
15 The costs for used fuel management and L&ILW storage costs incurred during the stations’
16 operating lives are not typically funded under the ONFA and therefore cannot be drawn from
17 the segregated funds and are not included in the ONFA funding liabilities. As these costs,
18 referred to as “internally funded”, are part of OPG’s legal obligation for nuclear waste, they are
19 included in the ARO and are funded from OPG’s operating cash flow.

20
21 The ONFA funding liabilities reflect a lifecycle view of nuclear wastes forecast over the
22 operating span of OPG’s nuclear generating facilities, including wastes not yet generated.
23 Conversely, as discussed above, the ARO considers the committed portion of the costs for
24 OPG’s nuclear liabilities, which includes lifetime variable costs associated with the wastes
25 generated to date but excludes such costs for wastes yet to be generated.

⁷ In accordance with the ONFA, the DF is established to pay for costs associated with the Decommissioning program, the L&ILW Disposal program, certain costs of the Used Fuel Storage program incurred after the nuclear stations are shut down, and the costs of the L&ILW storage program incurred after the nuclear stations are shut down. The UFF funds the costs of the Used Fuel Disposal program and certain costs of the Used Fuel Storage program after the nuclear stations are shut down.

1 OPG's station-level quarterly contributions to the segregated funds are determined periodically
2 with reference to (i) the "ONFA Decommissioning Balance to Complete Cost Estimate" and
3 "Used Fuel Balance to Complete Cost Estimate" (collectively, "funding liabilities") contained in
4 the approved ONFA Reference Plan in effect, and (ii) the corresponding segregated fund
5 balances at that point in time. Prescribed funding formulae and rules set out in the ONFA are
6 applied to calculate the contribution amounts based on the difference between the funding
7 liabilities and the corresponding segregated fund balances. The ONFA Reference Plan,
8 including all underlying cost estimates and assumptions, is required to be updated every five
9 years or whenever there is a significant change as determined under the ONFA. Station-level
10 continuities of the funding liabilities and segregated fund balances are maintained in
11 accordance with the ONFA. The funded status of the segregated funds at any point in time
12 represents the difference between the funding liabilities per the approved ONFA Reference
13 Plan then in effect and the value of the segregated funds.

14

15 The discount rate used to calculate the funding liabilities is determined in accordance with the
16 ONFA, which prescribes that such rate be set at 3.25% real rate of return plus the long-term
17 term change in the Ontario consumer price index. The resulting rate stands at 5.15% per the
18 approved 2022 ONFA Reference Plan and establishes the long-term target rate of return on
19 the segregated funds.

20

21 Cost estimates and underlying operational, economic and other planning assumptions
22 reflected in the funding liabilities are determined through a comprehensive process that draws
23 from a variety of sources, including the NWMO and independent third-party experts in different
24 fields. Cost estimates and underlying assumptions are reviewed by the Province and their
25 technical advisors prior to approving an ONFA Reference Plan. In addition to the funding
26 liabilities for the ONFA-eligible costs, an approved ONFA Reference Plan contains cost
27 estimates for internally funded costs, which are also subject to review by the Province.

28

29 The ONFA contains several features designed to reduce risk for future generations of
30 Ontarians, by ensuring that sufficient funds are available to pay for nuclear liabilities. First, the

1 segregated funds are held in third-party custodial accounts, externally administered and
2 subject to established reporting controls. Second, OPG cannot withdraw monies from the funds
3 unless the withdrawal reimburses OPG for an eligible incurred expenditure related to nuclear
4 waste management and decommissioning activities as determined under the ONFA and
5 approved by the Province. OPG does not have other rights to withdraw the funds, including on
6 the agreement's termination, as discussed below. Third, as also discussed below, specific
7 funding formulae and rules contained in the ONFA have been structured such that OPG has
8 been required to fund a substantial portion of the underlying used fuel liabilities in earlier years.

9
10 **3.2.1 Funding of ONFA Segregated Funds**

11 From the time of inception of the funds until the approved 2017-2021 ONFA Reference Plan
12 effective January 1, 2017 ("2017 ONFA Reference Plan"), OPG had been making overall
13 quarterly contributions to the UFF, as the fund was in an underfunded position. These
14 contributions reflected ONFA requirements that resulted in about three-quarters of the current
15 long-term used fuel management (disposal) costs being funded over the assumed remaining
16 operating periods of the nuclear stations per the 1999 ONFA Reference Plan.⁸ These operating
17 periods did not contemplate subsequent station refurbishment or extended operation decisions
18 and therefore are much shorter than the operating lives expected currently, including those
19 used for accounting purposes. In addition to the overall quarterly contributions, ONFA also
20 required OPG to make a special one-time payment of \$334M into the UFF in 2007, which
21 further accelerated the funding of the underlying liabilities.⁹ These factors, together with the
22 performance of the fund assets, led to the UFF becoming overall fully funded based on the
23 approved 2017 ONFA Reference Plan and subsequently based on the approved 2022 ONFA
24 Reference Plan.

⁸ This reflects ONFA requirements that the costs for the first 2.23 million fuel bundles, the estimated lifecycle quantity expected to be produced by the nuclear stations as of OPG's inception, be funded over the assumed remaining operating periods of the nuclear stations per the 1999 ONFA Reference Plan. As the estimated fixed costs of the used fuel long-term management (disposal) program, which are expected to be incurred irrespective of the fuel bundle volume, make up a significant portion of the total used fuel funding liability, the majority of the used fuel liability is funded over the assumed 1999 remaining operating period applicable to the first 2.23 million bundles (or within five years of a new approved ONFA Reference Plan if these operating periods have elapsed).

⁹ See EB-2007-0905, Ex. G2-2-1, p. 2, lines 11-20.

1 With respect to the DF, in 2003, the Province made a substantial contribution, which, together
2 with fund performance since that time, has been sufficient to ensure that the fund remained
3 fully funded overall each time a new contribution schedule has been established based on an
4 approved ONFA reference plan.¹⁰

5
6 Contributions to either or both the UFF or DF may be required in the future should the funds
7 be in an underfunded position relative to the funding liabilities based on a new approved ONFA
8 Reference Plan, including the 2027 ONFA Reference Plan once approved, as a result of
9 changes in underlying cost estimates and/or below-target fund investment performance.

10
11 Although each of the segregated funds was fully funded in aggregate when setting the
12 approved contribution schedule based on the 2017 ONFA Reference Plan (“2017 ONFA
13 Contribution Schedule”) and the 2022 ONFA Contribution Schedule, the portion of the
14 obligations related to certain stations was underfunded and, for certain stations, overfunded.
15 Accordingly, each of the 2017 ONFA Contribution Schedule and the 2022 ONFA Contribution
16 Schedule included a rebalancing of each of the funds through offsetting positive and negative
17 station-level contribution amounts, consistent with the intent of the ONFA that, over time, the
18 funds be fully funded at the station level. This resulted in overall positive prescribed facilities’
19 contributions and overall negative Bruce facilities’ contributions for respective years through
20 2026. The approved contributions to the UFF and the DF per the 2022 ONFA Contribution
21 Schedule are found in Attachment 2, and are reflected, as applicable, in the revenue
22 requirement impacts proposed in this Application under the OEB-approved recovery
23 methodologies for OPG’s nuclear liabilities costs.

24
25 **3.2.2 Segregated Funds Assets and Earnings**

26 In accordance with US GAAP, segregated funds are recognized as assets on OPG’s balance
27 sheet to the extent that OPG has a right to access the monies based on the terms of the ONFA.

¹⁰ The funded status of the DF was initially noted in Decision with Reasons, EB-2007-0905, November 3, 2008, p. 66.

1 OPG does not have the right or access to any portion of the segregated funds that are not
2 recorded on its balance sheet.

3

4 The difference between the ARO and the segregated fund assets recorded on OPG's balance
5 sheet represents the unfunded nuclear liability ("UNL"), as defined under the OEB-approved
6 revenue requirement methodology for OPG's prescribed facilities, discussed in Section 4.1.

7

8 Under the ONFA, the Province guarantees the rate of return earned for the portion of the UFF
9 attributed to the first 2.23M used fuel bundles at a prescribed real rate of return of 3.25% plus
10 the change in the Ontario consumer price index as defined in the ONFA (committed return").
11 The Province also limits OPG's financial exposure under the ONFA with respect to the lifecycle
12 costs of long-term management of the first 2.23M used fuel bundles. Any earnings above the
13 guaranteed rate accrue to the Province. The Province has a right to access cumulative excess
14 market earnings above the committed return when a new or amended ONFA Reference Plan
15 becomes approved, but has not done so to date. If the market earnings are lower than the
16 committed return, the Province is required to make a contribution to the UFF when a new or
17 amended ONFA Reference Plan is approved. The portion of the fund attributed to used fuel
18 bundles above the 2.23M threshold is not subject to the Province's guarantee and earns a
19 return based on the market performance of the fund assets. This portion is intended to fund
20 the incremental costs associated with the fuel bundles in excess of 2.23M.¹¹ Under the ONFA,
21 the Province also limits OPG's financial exposure with respect to the lifecycle costs of long-
22 term management of the first 2.23M used fuel bundles based on certain prescribed graduated
23 thresholds.

24

25 Upon termination of the ONFA, only the Province has a right to any surplus in the UFF. The
26 ONFA does not allow inter-fund transfers from the UFF to the DF. If there is a surplus in the
27 UFF such that the underlying funding liability, as defined by the most recently approved ONFA
28 Reference Plan, is at least 110% funded based on the fair market value of the fund assets and

¹¹ The incremental costs associated with fuel bundles in excess of the 2.23 million threshold do not include the fixed costs of the used fuel long-term management (disposal) program.

1 after taking into account the committed return on the guaranteed portion, the Province has the
2 right to access the surplus amount greater than 110% at any time.

3
4 There is no Provincial guarantee with respect to the DF, which earns a return based on the
5 market performance of the assets. OPG has the right to direct, solely when a new or amended
6 ONFA Reference Plan is approved, up to 50% of the surplus, if any, above 120% in the DF to
7 the UFF, with the Province entitled to receive the other 50%. Similar to the UFF, such surplus
8 is determined with reference to the underlying funding liability and the fair market value of the
9 fund assets. OPG has not directed any portion of the DF surplus to the UFF since the funds'
10 inception. The Province does not have a right to withdraw, at its own discretion, any portion of
11 the surplus amounts in the DF until the termination of the ONFA, at which time all such surplus
12 amounts will accrue to the Province.

13
14 As OPG does not have the right to any surplus funding in the UFF, in accordance with generally
15 accepted accounting principles, it limits the portion of the UFF recognized as an asset to the
16 underlying funding liability per the approved ONFA Reference Plan in effect. For the DF, OPG
17 records, as an asset, an amount equal to the underlying funding liability plus the portion of DF
18 surplus funding, if any, equal to 50% of the surplus above the 120% threshold, in recognition
19 of the company's right to direct that portion to the UFF. The portion of the DF surplus
20 recognized as an asset is further limited by the amount of underfunding in the UFF, if any, such
21 that when the UFF is fully funded, none of the surplus in the DF is recorded as an asset. This
22 additional limitation recognizes that a transfer from the DF to UFF when the UFF is fully funded
23 would increase the surplus in the UFF that OPG cannot access. When the portion of the DF or
24 UFF asset is limited to the underlying funding liability as described above, fund earnings are
25 recorded at the rate of growth of such liability (i.e., the discount rate) per the approved ONFA
26 Reference Plan in effect.¹²

¹² The portion of any surplus in the funds not recognized as an asset is recorded as Due to Province in OPG's financial statements. The OEB addressed the matter of the Due to Province amounts in EB-2013-0321 (see Decision with Reasons, November 20, 2014, p. 110).

1 Continuity schedules showing the opening, closing and average balances of the segregated
2 fund assets and UNL are provided in Ex. C2-1-1, Table 2 (for OPG's prescribed facilities) and
3 Ex. C2-1-1, Table 3 (for the Bruce facilities).¹³

4 5 **4.0 APPROVED METHODOLOGY FOR RECOVERY OF NUCLEAR LIABILITIES**

6 In accordance with section 6(2)8 of O. Reg. 53/05, the OEB is required to ensure that OPG
7 recovers the revenue requirement impact of its nuclear waste management and
8 decommissioning liabilities arising from the current approved ONFA Reference Plan.

9
10 The OEB established methodologies for recovery of OPG's nuclear liabilities costs in OPG's
11 first payment amounts proceeding, EB-2007-0905. Different methodologies were established
12 for OPG's prescribed facilities and the Bruce facilities, as discussed below. These
13 methodologies have been applied in all subsequent OPG proceedings and were used to
14 develop the proposed recovery amounts in this Application.

15
16 The recovery methodologies established by the OEB for these facilities are largely based on
17 accounting values determined in accordance with US GAAP. The main difference between the
18 methodology for OPG's prescribed facilities and the Bruce facilities is the application of a return
19 on rate base, a regulatory construct, to the prescribed facilities, as opposed to including the
20 net amount of ARO accretion expense and segregated fund earnings for the Bruce facilities.

21
22 OPG's proposed treatment of the nuclear liabilities costs that arise during the IR term with
23 respect to the DNNP facilities is discussed in Section 8.0.

24 25 **4.1 Approved Recovery Methodology for OPG's Prescribed Facilities**

26 Under the OEB-approved methodology for the prescribed facilities, OPG recovers:

- 27
- depreciation expense on the ARC balance;

¹³ The average UNL balances are provided for the prescribed facilities but not the Bruce facilities as these values are required to determine rate base values and the return on rate base used only in the approved recovery methodology for OPG's prescribed facilities.

- 1 • used fuel variable expenses;
- 2 • L&ILW variable expenses;
- 3 • return at the ARO weighted average accretion rate on the lesser of the average
- 4 unamortized ARC and average UNL; and
- 5 • return at the approved weighted average cost of capital (“WACC”) on the portion, if any,
- 6 of average unamortized ARC in excess of average UNL.

7

8 Each of these components is discussed separately below. The associated income tax impacts
9 are also summarized below and further discussed in Ex. F4-2-1. Accounting accretion expense
10 on the ARO and earnings on the segregated funds do not directly form part of the revenue
11 requirement for OPG’s prescribed facilities, with the return component of the methodology
12 effectively replacing the net amount of accretion expense and segregated fund earnings.

13

14 Section 5.2(1) of O. Reg. 53/05 establishes the Nuclear Liability Deferral Account, which, for
15 OPG’s prescribed facilities, records the revenue requirement impact of any change in nuclear
16 liabilities arising from an approved ONFA Reference Plan, measured against the impacts
17 reflected in the approved payment amounts. Section 6(2)7 identifies the items on which the
18 revenue requirement impact is to be based. Inclusive of the December 2025 amendment to O.
19 Reg. 53/05, these items are as follows:

- 20 • return on rate base,
- 21 • depreciation expense,
- 22 • income and capital taxes,
- 23 • fuel and operations expenses, and
- 24 • other gains and losses.

25

26 This account is further discussed in Ex. H1-1-1, Section 5.14.

27

28 4.1.1 Depreciation Expense

29 Depreciation on the unamortized ARC for the prescribed facilities is treated in the same
30 manner as the depreciation associated with other capital assets; it is included in annual nuclear

1 depreciation and amortization expense presented in Ex. F4-1-1, Table 2.¹⁴ The ARC is
2 depreciated over the the remaining useful lives of the stations. Actual amounts of ARC
3 depreciation expense for the 2020-2024 period and the forecast amounts for the 2025-2031
4 period are presented in Ex. C2-1-1, Table 1, line 1.¹⁵

5
6 4.1.2 Used Fuel Variable Expenses

7 The used fuel expense for OPG's prescribed facilities is calculated by reference to the
8 difference between the lifecycle cost estimate and the amount of committed costs included in
9 the nuclear liabilities for the corresponding nuclear waste management programs. This
10 difference represents the variable costs of future fuel waste. The present value of this cost
11 difference is then divided by the forecast number of future fuel bundles to calculate the per
12 bundle cost rate. Used fuel variable expenses are calculated by applying the per bundle cost
13 rate to the forecast used fuel volume. The actual used fuel expenses for the 2020-2024 period
14 and the forecast amounts for the 2025-2031 period are presented in Ex. C2-1-1, Table 1, line
15 2, and form part of the nuclear fuel expense presented at Ex. F2-5-1, Table 1a for OPG's
16 prescribed facilities. The accounting discount rate of 3.93% associated with the latest ARO
17 tranche (i.e., the December 31, 2023 tranche) was used to determine the forecast used fuel
18 expenses for the 2025-2031 period.

19
20 4.1.3 Low and Intermediate Level Waste Variable Expenses

21 The L&ILW variable expenses for OPG's prescribed facilities are a component of the OM&A
22 expenses reflected in Ex. F2-2-1, Table 1a, as well as Ex. F2-7-1, Table 1 (for the Darlington
23 Refurbishment Program) and Ex. F2-8-1, Table 1 (for the Pickering Refurbishment Program).

¹⁴ For a station that has reached the end of its useful life, amounts arising from a change in the ARO that would otherwise be recorded as a change in the ARC are instead charged, in full, to the income statement in the period the ARO change is recorded. Such impact would be reported in the income statement as an operations expense or other gain or loss.

¹⁵ The OEB's decision for the inclusion of the ARC depreciation expense in the revenue requirement was related to the following observations in the EB-2007-0905, Decision with Reasons, pp. 88-89:
The Board will accept inclusion in the revenue requirement of depreciation expense for the nuclear plants computed in accordance with GAAP, as proposed by OPG. Under GAAP, ARC included in the net book value of fixed assets is depreciated like any other fixed asset cost. It appears as an expense in OPG's income statement. The Board finds that this approach results in a rational allocation of cost.

1 Similar to used fuel, the difference between the lifecycle cost estimate and the amount of
2 committed costs included in the nuclear liabilities for the corresponding nuclear waste
3 management programs represents the variable costs of future waste. The present value of this
4 cost difference is then divided by the forecast future L&ILW volume estimates to calculate the
5 dollar per cubic metre rates. The L&ILW variable expenses are calculated by applying the
6 corresponding dollar per cubic metre rate to the forecast waste volumes. The actual L&ILW
7 expenses for the 2020-2024 period and the forecast amounts for the 2025-2031 period are
8 presented in Ex. C2-1-1, Table 1, line 3. The accounting discount rate of 3.93% associated
9 with the latest ARO tranche (i.e., the December 31, 2023 tranche) was used to determine the
10 forecast L&ILW expenses for the 2025-2031 period.

11

12 4.1.4 Return on Rate Base

13 The OEB-approved nuclear liabilities recovery methodology requires that the return on a
14 portion of the rate base be limited to the weighted average accretion rate. This portion is equal
15 to the lesser of: (i) the average UNL related to OPG's prescribed facilities, and (ii) the average
16 unamortized ARC included in the fixed asset balances for these facilities. The remainder of
17 OPG's rate base, including the amount, if any, by which average ARC exceeds average UNL,
18 earns the OEB-approved WACC. The average UNL and the average unamortized ARC,
19 including the apportionment of the ARC between amounts subject to the weighted average
20 accretion rate and the WACC rate, are provided for the 2020-2031 period in Ex. C2-1-1, Table
21 1a for OPG's prescribed facilities.¹⁶

22

23 The UNL balances for the 2025-2031 period are projected based on forecast ARO and
24 segregated fund balances, taking into account forecast activity for future years. For the ARO,

¹⁶ The OEB's decision for splitting the ARC return component between a portion attracting the weighted average accretion rate and a portion attracting the WACC was related to the following observations in the EB-2007-0905, Decision with Reasons:

At some point, the unamortized ARC that is included in fixed assets in effect will be funded by debt or equity because OPG is obligated by ONFA to make cash contributions to the segregated funds; however, until those contributions occur, the ARC component of fixed assets has not been funded with capital supplied by investors. (p. 89)

Clearly, OPG incurs accretion expense (at an average rate of 5.6%) on its nuclear liabilities whether they are funded or not. (p. 91)

1 forecast activity includes accretion expense on the ARO balance, used fuel and L&ILW variable
2 expenses, and expenditures against the ARO. For the segregated funds, forecast activity
3 includes fund earnings at the target rate of 5.15% consistent with the discount rate per the
4 approved 2022 ONFA Reference Plan, and fund disbursements. The forecast activity for
5 OPG's prescribed facilities' portion of the ARO and segregated funds is shown in Ex. C2-1-1,
6 Table 2.

7

8 As seen in Ex. C2-1-1, Table 1a, Note 1, the amount of average unamortized ARC is projected
9 to exceed the amount of average UNL in each year of the IR term. In 2027 and 2028, the
10 excess of the forecast average unamortized ARC over the forecast average UNL earns the
11 proposed WACC and the remainder earns the current weighted average accretion rate of
12 4.72%. For the 2029-2031 period, the forecast of average UNL is negative and has been set
13 at \$0 for the purposes of the revenue requirement calculation.¹⁷ As such, the full amount of the
14 forecast average ARC earns the proposed WACC. The resulting return on rate base amounts
15 are shown in Ex. C2-1-1, Table 1, lines 4 and 5. The proposed WACC is derived from the
16 deemed capital structure, return on equity and cost of debt proposed by OPG for its prescribed
17 facilities in this application and as set out in Ex. C1-1-1, Tables 1-5 for the corresponding years.
18 The calculation of the current weighted average accretion rate, performed as of the most recent
19 completed year (year-end 2024) in the same manner as in OPG's prior payment amounts
20 applications, is presented in Ex. C2-1-1, Table 1b.

21

22 4.1.5 Income Tax Effects

23 Through the calculation of regulatory income taxes for OPG's prescribed facilities, the nuclear
24 revenue requirement includes income tax impacts associated with the above cost elements for
25 the nuclear liabilities, as well as the tax impacts of the prescribed facilities' contributions to the
26 segregated funds, expenditures on nuclear liabilities and disbursements from the segregated
27 funds.

¹⁷ The approach of setting the average UNL at \$0 rather than applying a negative UNL results in a lower revenue requirement impact and is consistent with the treatment in EB-2020-0290.

1 As further described in Ex. F4-2-1, Sections 3.2.1, 3.2.2, and 3.2.6, the cost components of
2 OPG's prescribed facilities' recovery methodology (depreciation, nuclear waste management
3 variable expenses and return components) are not tax deductible and therefore attract a tax
4 gross-up cost. As described in Ex. F4-2-1, Sections 3.2.3 and 3.2.4, contributions to the
5 segregated funds and both ONFA-funded and internally funded expenditures on nuclear
6 liabilities are deductible for income tax purposes in accordance with regulations under the
7 *Electricity Act, 1998*, while the disbursements from the segregated funds to cover the ONFA-
8 funded expenditures are correspondingly taxable. The income tax effects of these components
9 are included in the nuclear liabilities' revenue requirement impact at Ex. C2-1-1 Table 1, line
10 7, as calculated in Ex. C2-1-1 Table 1a, Note 2.

11

12 **4.2 Approved Recovery Methodology for the Bruce Facilities**

13 For the Bruce facilities, the OEB determined, by reference to sections 6(2)9 and 6(2)10 of O.
14 Reg. 53/05, that the costs of the nuclear liabilities (as well as other OPG revenues and costs
15 related to the Bruce stations that form part of Bruce Lease net revenues) are to be calculated
16 using US GAAP applicable to unregulated entities. Section 6(2)9 requires that the OEB
17 ensure that OPG recovers all the costs it incurs with respect to the Bruce. Section 6(2)10
18 requires that the excess of OPG's revenues over costs related to its lease of these stations
19 be applied to reduce the payment amounts for the prescribed nuclear facilities.

20

21 On this matter, the OEB found the following in the EB-2007-0905 Decision with Reasons:¹⁸

22

23

24

25

26

27

28

29

30

The Board finds that the appropriate method to calculate OPG's test period revenues and costs related to the Bruce stations is to use amounts calculated in accordance with GAAP. OPG's investment in Bruce is not rate regulated. In the Board's view, it would not be a reasonable interpretation of Section 6(2)9 and 6(2)10 to find that OPG should use an accounting method to determine revenues and costs that an unregulated business would otherwise never use.

¹⁸ EB-2007-0905, Decision with Reasons, pp. 109-110.

1 OPG should base its calculation of costs on GAAP. The costs
2 should include all items that would be recognized as expenses
3 under GAAP, including accretion expense on the nuclear
4 liabilities. Forecast earnings on the segregated funds related to
5 the Bruce liabilities should be included as a reduction of costs.
6

7 Under this approach, OPG recovers ARC depreciation expense, used fuel and L&ILW variable
8 expenses and ARO accretion expense, less segregated fund earnings. Each of these
9 components is discussed separately below, as is a summary of the associated income tax
10 impacts.
11

12 To give effect to O. Reg. 53/05 requirements, in EB-2007-0905, the OEB established the Bruce
13 Lease Net Revenues Variance Account, which captures the difference between the forecast
14 and actual Bruce Lease net revenues, including nuclear liabilities costs. The Bruce Lease Net
15 Revenues Variance Account is discussed in Ex. H1-1-1, Section 5.16.
16

17 Amendments made to Section 6(2)10.1 of O. Reg. 53/05 in December 2025 require the OEB
18 to ensure that OPG recovers all costs it incurs in relation to its nuclear liabilities with respect
19 to the Bruce facilities as reflected in the audited financial statements approved by OPG's Board
20 of Directors, to the extent that those costs are not otherwise recovered under Section 6(2) of
21 the regulation. These provisions have the effect of confirming the current recovery
22 methodology for OPG's nuclear liabilities' costs for the Bruce facilities.
23

24 4.2.1 Depreciation Expense

25 Depreciation on the unamortized ARC for the Bruce facilities is treated in the same manner as
26 the depreciation associated with other capital assets and the ARC for the prescribed facilities.
27 Total depreciation expense for the Bruce facilities is presented in Ex. G2-2-1, Table 4. Included
28 in these amounts are the actual amounts of ARC depreciation expense for 2020-2024 and
29 such forecast amounts for the 2025-2031 period, as presented in Ex. C2-1-1, Table 1, line 9.
30

31 4.2.2 Used Fuel Variable Expenses

32 The used fuel expense for the Bruce facilities is determined in the same manner as described

1 in Section 4.1.2 for OPG's prescribed facilities. The used fuel expense for the Bruce facilities
2 is presented in Ex. G2-2-1, Table 5. Actual amounts of the expense for the 2020-2024 period
3 and such forecast amounts for the 2025-2031 period are presented in Ex. C2-1-1, Table 1, line
4 10.

5
6 **4.2.3 Low and Intermediate Level Waste Variable Expense**

7 L&ILW variable expenses for the Bruce facilities are determined in the same manner as
8 described in Section 4.1.3 for OPG's prescribed facilities. The L&ILW expenses for the Bruce
9 facilities are included in amounts shown in Ex. G2-2-1, Table 5. Actual amounts of the
10 expenses for the 2020-2024 period and such amounts forecast for the 2025-2031 period are
11 also presented in Ex. C2-1-1, Table 1, line 11.

12
13 **4.2.4 Accretion Expense**

14 As discussed above, accretion expense represents the growth in the present value-based ARO
15 due to the passage of time. The attribution of the ARO balances between OPG's prescribed
16 facilities and the Bruce facilities is discussed in Section 3.1 above. Forecast accretion expense
17 for the Bruce facilities for the 2025-2031 period is derived by applying the corresponding
18 accretion rates to the opening balances of each ARO tranche, using the same methodology
19 as in prior OPG payment amounts applications. The forecast amounts were derived by
20 reference to the December 31, 2024 ARO balances from OPG's 2024 consolidated financial
21 statements, using the half-year rule and based on projected changes in the Bruce stations'
22 portion of the ARO due to additional used fuel and L&ILW variable expenses and expenditures
23 against the ARO during the forecast period as shown in Ex. C2-1-1, Table 3. Actual amounts
24 of the accretion expense for the 2020-2024 period and such amounts forecast for the 2025-
25 2031 period are presented in Ex. C2-1-1, Table 1, line 12 as well as Ex. G2-2-1, Table 5, line
26 3.

27
28 **4.2.5 Earnings on the Segregated Funds**

29 The station-level attribution of the segregated funds balances is discussed in Section 3.1
30 above. Actual segregated funds earnings for the Bruce facilities for the 2020-2024 period and

1 such amounts forecast for the 2025-2031 period are presented in Ex. C2-1-1, Table 1, line 13
2 as well as Ex. G2-2-1, Table 5, line 4. Forecast segregated funds earnings were determined
3 using the same methodology as in prior OPG payment amounts applications. The forecast
4 amounts were determined by applying the target fund earnings rate of 5.15% consistent with
5 the discount rate per the approved 2022 ONFA Reference Plan, to the opening balances of
6 each fund. Such earnings take into account, using the half-year rule, contributions to the
7 segregated funds pursuant to the approved 2022 ONFA Contribution Schedule and projected
8 disbursements from the funds as shown in Ex. C2-1-1, Table 3. The forecast amounts were
9 derived by reference to the December 31, 2024 segregated funds asset balances from OPG's
10 2024 consolidated financial statements.

11 12 4.2.6 Income Tax Effects

13 The calculation of Bruce Lease net revenues includes the income tax expense associated with
14 the above cost elements for the nuclear liabilities.¹⁹ As these items are not deductible for tax
15 purposes, they attract a deferred income tax credit in accordance with generally accepted
16 accounting principles. This credit is included in the nuclear liabilities' revenue requirement
17 impact at Ex. C2-1-1, Table 1, line 14, as calculated in Ex. C2-1-1, Table 1a, Note 3. As part
18 of Bruce Lease net revenues, segregated fund contributions and expenditures on nuclear
19 liabilities (net of disbursements from the segregated funds), as tax deductible items, reduce
20 the current income tax expense but also attract an equal and offsetting deferred income tax
21 cost, with no net effect.²⁰

22
23 Additionally, Bruce Lease net revenues amounts are subject to regulatory income tax
24 treatment through their impact on regulatory earnings before tax for the prescribed facilities,
25 as shown at Ex. C2-1-1, Table 1, line 16.

¹⁹ The calculation of the total income tax expense component of Bruce Lease net revenues is discussed further in Ex. G2-2-1, Sections 4.8 and 4.9 and presented in Ex. G2-2-1, Tables 7 and 8.

²⁰ As the net tax effect is nil, these items are not identified in the calculation of the income tax component of Bruce Lease net revenues at Ex. C2-1-1, Tables 1 and 1a.

1 **5.0 CHANGES IN ARO, UNAMORTIZED ARC AND SEGREGATED FUND BALANCES**

2 The actual and forecast growth in the ARO for OPG's prescribed facilities and for the Bruce
3 facilities for the 2020-2031 period is primarily the result of accretion expense, partially offset
4 by expenditures against the ARO and subject to year-end ARO adjustments recorded during
5 historical years in connection with the approved 2022 ONFA Reference Plan and changes in
6 the accounting EOL date assumptions for Pickering.

7
8 The variability in the ARC for the prescribed facilities during historical years reflects the net
9 effect of depreciation, the year-end ARC adjustments corresponding to the above ARO
10 adjustments, and the end of the useful life for Pickering Units 1 and 4 in 2024. Beginning in
11 2025, the prescribed facilities' ARC exhibits a declining trend as it gradually depreciates based
12 on the current accounting EOL dates, with significantly lower annual depreciation compared to
13 the preceding years. The declining ARC for the Bruce facilities over the 2020-2031 period
14 reflects gradual depreciation based on the current accounting EOL dates as well as the impact
15 of the ARC adjustments corresponding to the above ARO adjustments.

16
17 The 2022 ONFA Reference Plan (year-end 2021) ARO/ARC adjustment and the year-end
18 2023 ARO/ARC adjustment, both of which are reflected in the recovery amounts sought in this
19 application, are further discussed below.²¹

²¹ In reflecting the approved 2022 ONFA Reference Plan, the Application also incorporates the ARO/ARC adjustment recorded as of year-end 2020 in accordance with US GAAP to reflect the extension of the accounting EOL date for Pickering Units 1 and 4 to December 31, 2024 (Ex. F4-1-1, Section 3.5). This extension and its impacts were detailed during the course of the EB-2020-0290 proceeding, but due to the timing of preparing OPG's underlying business plan, were not included in the forecasts underpinning the approved payment amounts (EB-2020-0290: Ex. L-F4-01-Staff-269, Attachment 1, p. 4; Ex. L-F4-01-Staff-271; Ex. C2-01-CCC-029). In accordance with the EB-2020-0290 Payment Amounts Order, the resulting nuclear liabilities' revenue requirement impact for the prescribed facilities was recorded in the Impact Resulting from Optimization of Pickering Station End-of-Life Dates Deferral Account during 2021 and, upon approval of the 2022 ONFA Reference Plan that incorporated the revised EOL date for Pickering Units 1 and 4, is being recorded in the Nuclear Liability Deferral Account since 2022 and until the effective date of the next payment amounts order incorporating these changes in the nuclear payment amounts. The year-end 2022 balances in these accounts were approved for recovery through the OEB-approved settlement proposal in EB-2023-0336. The details of the year-end 2020 ARO/ARC adjustment are reproduced in Ex. C2-1-1, Table 4. Additional information on the historical and bridge year impacts of the adjustment can be found in Ex. H1-1-1, Section 5.23.

1 The actual and forecasted growth in the segregated fund balances for the prescribed facilities
2 and the Bruce facilities over the 2020-2031 period is mainly the result of actual and forecasted
3 fund earnings and station-level contribution amounts in accordance with the 2022 ONFA
4 Contribution Schedule, net of disbursements from the funds.

5
6 **5.1 2022 ONFA Reference Plan (Year-End 2021) Nuclear Liabilities Adjustment**

7 Effective December 31, 2021, in accordance with US GAAP, OPG recorded a net decrease in
8 the ARO and ARC balances of \$327.3M reflecting the approved 2022 ONFA Reference Plan,
9 comprising an increase of \$272.6M in the ARO and associated ARC for OPG's prescribed
10 facilities and a decrease of \$599.9M in the ARO and associated ARC for the Bruce facilities.
11 The impacts arising from the year-end 2021 ARO/ARC adjustment and the 2022 ONFA
12 Contribution Schedule are being recorded in the Nuclear Liability Deferral Account (for the
13 prescribed facilities) and the Bruce Lease Net Revenues Variance Account (for the Bruce
14 facilities) since 2022.

15
16 The increase in the ARO and ARC balances for the prescribed facilities was primarily driven
17 by updated decommissioning estimates for Pickering and the net impact of new long-term
18 disposal strategy assumptions for L&ILW following the cancellation of OPG's previously
19 planned DGR in Kincardine, Ontario. The decrease in the ARO and ARC balances for the
20 Bruce facilities was primarily driven by lower cost estimates for used fuel disposal accounting
21 liabilities and the net impact of new long-term disposal strategy assumptions for L&ILW
22 following the cancellation of OPG's previously planned DGR in Kincardine, Ontario.

23
24 The details of the 2022 ONFA Reference Plan (year-end 2021) ARO/ARC adjustment are
25 provided in Ex. C2-1-1, Table 4, and are the same as provided in EB-2023-0336 and reflected
26 in the year-end 2022 balances of the Nuclear Liability Deferral Account and the Bruce Lease
27 Net Revenues Variance Account approved for recovery in that proceeding.²² For OPG's
28 prescribed facilities, the total revenue requirement impact of the 2022 ONFA Reference Plan
29 (year-end 2021) ARO/ARC adjustment as well as of the differences in the station-level

²² EB 2023-0336, Ex. H1-1-1, Table 18a.

1 segregated fund contribution amounts arising from the 2022 ONFA Contribution Schedule was
2 an increase of \$164.3M for 2022, \$123.9M for 2023 and \$119.5M for 2024 and is projected to
3 be a decrease of \$17.4M in 2025 and an increase of \$3.0M in 2026.²³

4
5 The higher impacts for the prescribed facilities in the historical years were primarily due to
6 updated decommissioning cost estimates that impacted Pickering Units 1-4, giving rise to an
7 increase in the ARC that was depreciated over a relatively shorter period of three years based
8 on the remaining service life of these units at the end of 2024. This resulted in a higher
9 depreciation expense and associated regulatory income tax impacts for those years. The
10 impacts also reflect higher L&ILW variable expenses due to higher per cubic metre cost rates,
11 primarily owing to the impact on these costs of the new L&ILW long-term disposal strategy
12 assumptions, and are partly offset by the regulatory income tax reductions due to higher
13 segregated fund contributions over 2023-2026 based on the 2022 ONFA Contribution
14 Schedule. The details of the impacts for 2023-2026 are set out in Ex. H1-1-1, Table 17.

15 16 **5.2 Year-End 2023 Nuclear Liabilities Adjustment**

17 As discussed in Ex. F4-1-1, Section 3.5, OPG implemented a change to extend the accounting
18 EOL date assumption for Pickering Units 5-8 to December 31, 2070, effective December 31,
19 2023, based on the expectation of their refurbishment.

20
21 In accordance with US GAAP, OPG recorded a net increase in ARC balances of \$159.7M
22 effective December 31, 2023 to reflect the change in the Pickering Units 5-8 EOL date
23 assumption. For the ARO balances, this comprised an increase of \$598.5M for OPG's
24 prescribed facilities and through the allocation of central program costs across the nuclear fleet
25 based on lifecycle waste volume estimates, a decrease of \$438.7M for the Bruce facilities. For
26 the ARC balances, this comprised of the year-end 2023 ARO adjustment are provided in Ex.

²³ 2022: EB-2023-0336, Ex. H1-1-1, Table 18a, line 14, col. (a); 2023-2026: Ex. H1-1-1, Table 17, line 15, cols. (a)-(d).

1 C2-1-1, Table 4.²⁴

2

3 As the change in the Pickering Units 5-8 EOL date assumption is not yet reflected in the current
4 approved ONFA Reference Plan, the prescribed facilities' impacts arising from the year-end
5 2023 ARO/ARC adjustments, including the impacts of the extended EOL date on the
6 depreciation of existing ARC balances, are being recorded in the Impact Resulting from
7 Optimization of Pickering Station End-of-Life Dates Deferral Account (rather than the Nuclear
8 Liability Deferral Account). For the Bruce facilities, the impacts are being recorded in the Bruce
9 Lease Net Revenues Variance Account since 2024.

10

11 The net increase in the ARO was primarily due to the increase in the committed costs
12 associated with used fuel disposal resulting from the extension of the assumed Pickering Units
13 5-8 operating period and related additional used fuel, as well as incremental committed costs
14 to manage low and intermediate level waste resulting from the same, together with updated
15 decommissioning estimates for Pickering. These factors were largely offset by the reduction in
16 the present value of the decommissioning costs for Pickering Units 5-8 as a result of the useful
17 life extension.

18

19 Over the 2024-2026 period, the total projected revenue requirement impact for OPG's
20 prescribed facilities from the above changes is an increase of \$82.6M for 2024 and a projected
21 minimal decrease of \$1.9M in 2025 and less than \$1.0M in 2026.²⁵ The higher impact in 2024
22 was primarily due to updated decommissioning cost estimates that impacted Pickering Units
23 1-4, giving rise to an increase in the ARC that was depreciated over a relatively shorter period
24 of one year based on the remaining service life of these units at the end of 2024. This resulted
25 in higher depreciation expenses and associated regulatory income tax impacts for those years.
26 The impacts also reflect generally offsetting higher depreciation expense and higher return on

²⁴ As explained in Ex. C2-1-1, Table 4, Note 3, while the total ARO adjustment is equal to the total ARC adjustment, to avoid certain station-level ARC values from becoming negative, the negative station-level ARC amounts have been reallocated to other stations. As such, the ARO adjustments for the prescribed facilities and for the Bruce facilities are not equal to the corresponding post-reallocation ARC adjustments.

²⁵ Ex. H1-1-1 Table 19, line 20, cols.(a)-(c)

1 rate base as a result of the higher ARC balance related to Pickering Units 5-8, and lower used
2 fuel and L&ILW variable expenses due to a higher discount rate in effect for the year-end 2023
3 ARO adjustment.

4
5 With the Pickering Refurbishment approved to proceed to execution, OPG anticipates that the
6 impact of the corresponding useful life extension of Pickering Units 5-8 will be incorporated in
7 the approved 2027 ONFA Reference Plan. Consistent with the 2025-2031 Business Plan and
8 aligned to the overall operating assumptions underpinning the Application, the proposed IR
9 term nuclear revenue requirements reflect the prescribed facilities and Bruce facilities' impacts
10 arising from this useful life change and the year-end 2023 ARO/ARC adjustments recorded in
11 OPG's financial statements. As detailed in Ex. C2-1-1, Table 5, these impacts are estimated
12 to be a net reduction of approximately \$280M to the aggregate IR term cost recovery amounts,
13 consisting of an increase of approximately \$40M for the prescribed facilities and a decrease
14 \$320M for the Bruce facilities.²⁶ For the Bruce facilities, this is primarily driven by lower
15 depreciation and accretion expenses due to the decreases in ARO/ARC balances, as well as
16 the lower used fuel and L&ILW variable expenses resulting from the higher discount rate of
17 3.93% in effect as result of the year-end 2023 ARO/ARC adjustment (compared to 2.45% in
18 use previously; see footnote 4 above).

19
20 **6.0 HEAVY WATER MANAGEMENT PLANS FOR END OF COMMERCIAL OPERATION**
21 **FOR PICKERING UNITS**

22 In the EB-2020-0290 Decision and Order, in its findings with respect to the Heavy Water
23 Storage and Drum Handling Facility ("D2O Storage Project" or "D2O Storage Facility"), the
24 OEB noted, in respect of the Pickering decommissioning, that OPG should be prepared to
25 explain its proposed heavy water management plan and storage costs associated with
26 decommissioned units.²⁷

²⁶ Ex. C2-2-1, Table 5, line 8, col. (k) for prescribed facilities and Ex. C2-2-1, Table 5, line 17, col. (k) for Bruce facilities (comprised of Ex. C2-2-1, Table 5, line 15, col. (k) for Bruce Lease net revenues impact and Ex. C2-2-1, Table 5, line 16, col. (k) for the associated regulatory income tax impact).

²⁷ EB-2020-0290 Decision and Order, November 15, 2021, p. 47.

1 Since EB-2020-0290, OPG has ended commercial operation of Pickering Units 1 and 4 in late
2 2024, and Pickering Units 5-8 are now approved for refurbishment. OPG's strategy with
3 respect to the heavy water removed from Pickering Units 1 and 4 following the end of their
4 commercial operation is to store the heavy water at the D2O Storage facility and to use these
5 quantities for ongoing operational purposes, including any makeup heavy water required for
6 the Darlington, Pickering Units 5-8 (once refurbished) and Bruce stations over their post-
7 refurbishment lives. As such, no decommissioning cost estimate is expected for this heavy
8 water. No portion of the cost of the D2O Storage facility or its operation is included in OPG's
9 decommissioning estimates.

10 11 **7.0 2027 ONFA REFERENCE PLAN STATUS**

12 As discussed in Section 3.2, OPG reviews and updates the ONFA Reference Plan and
13 associated lifecycle cost estimates and assumptions at least every five years, in line with the
14 ONFA requirements. An updated ONFA Reference Plan is submitted to the Province for review
15 and approval. The next ONFA Reference Plan update, effective for the 2027-2031 period, is
16 under development and is expected to be finalized in late 2026 for the Province's subsequent
17 approval.

18
19 The proposed IR term nuclear revenue requirements reflect the approved 2022 ONFA
20 Reference Plan. The corresponding impact of the approved 2027 ONFA Reference Plan will
21 be recorded in the Nuclear Liability Deferral Account for OPG's prescribed facilities and the
22 Bruce Lease Net Revenues Variance Account for the Bruce facilities, as described in Ex. H1-
23 1-1.

24 25 **8.0 PROPOSED TREATMENT OF NUCLEAR LIABILITIES FOR DNNP FACILITIES**

26 OPG will be responsible for the nuclear waste management and decommissioning obligations
27 associated with the DNNP facilities. OPG expects to recognize the initial nuclear liabilities for
28 DNNP Unit 1 in its financial statements, in the same manner as described in Section 3.1, within
29 the IR term. While the DNNP facilities are not currently included in the ONFA, OPG is in the

1 process of establishing comprehensive cost estimates for these future nuclear liabilities in
2 conjunction with the 2027 ONFA Reference Plan update process.

3
4 Section 6(2)10.1 of O. Reg. 53/05 requires the OEB to ensure that OPG recovers all the costs
5 it incurs in relation to its nuclear liabilities with respect to the DNNP facilities as they are
6 reflected in OPG's audited financial statements approved by OPG's Board of Directors, to the
7 extent that those costs are not otherwise recovered under Section 6(2) of the regulation.²⁸
8 Pursuant to the regulation, the Application proposes to establish the DNNP Nuclear Liability
9 Deferral Account for OPG to record the difference between: (i) the nuclear liabilities costs with
10 respect to the DNNP facilities reflected in OPG's nuclear revenue requirement approved by
11 the OEB, and (ii) OPG's actual nuclear liabilities costs with respect to the DNNP facilities, as
12 reflected in OPG's audited annual financial statements. This will result in the nuclear liabilities
13 costs for the DNNP facilities being recovered using the same methodology that the OEB has
14 approved for the Bruce facilities (see Section 4.2).

15
16 As OPG has not yet developed comprehensive cost estimates for the future nuclear liabilities
17 for the DNNP facilities, and none have been recorded in OPG's financial statements, OPG has
18 not reflected any corresponding amounts in the proposed IR term nuclear revenue
19 requirements. OPG proposes that such costs incurred during the IR term for the DNNP facilities
20 be recorded in the DNNP Nuclear Liability Deferral Account, which recording would commence
21 once these nuclear liabilities are first recognized in OPG's financial statements.²⁹

²⁸ Section 8 of O. Reg. 53/05 requires the OEB issue an order specifying satisfaction with certain conditions relating to DNNP LP before the definition of "nuclear decommissioning liability" in Section 0.1(1) includes the decommissioning of the DNNP facilities and therefore Section 6(2)10.1 applies. The Application expects that these requirements will be met at the end of 2025.

²⁹ The initial recognition of nuclear liabilities for the DNNP facilities may impact the nuclear liabilities costs for OPG's existing facilities through the allocation of central program costs across the nuclear fleet. For OPG's prescribed facilities, such impacts would be subject to the Nuclear Liability Deferral Account or the accounting order requirement with respect to a proposed accounting change impacting the nuclear liabilities other than as a result of an ONFA Reference Plan update (described in Section 2.0), as applicable. For the Bruce facilities, such impacts would be subject to the Bruce Lease Net Revenues Variance Account.

LIST OF ATTACHMENTS

1

2

3 Attachment 1: Provincial Letter of Approval for the 2022 ONFA Reference Plan

4

5 Attachment 2: 2022 Ontario Nuclear Funds Agreement Contribution Schedule

Ontario Financing Authority
1 Dundas Street West
Suite 1200
Toronto ON M7A 1Y7

Office ontarien de financement
1 rue Dundas ouest
Bureau 1200
Toronto ON M7A 1Y7



Corporate & Electricity Finance Division
Assistant Deputy Minister's Office
Tel. (416) 843-8099

March 1, 2022

MEMORANDUM TO: Alex Kogan
Senior Vice President, Commercial Integration & Strategy, OPG

Jason Van Wart
Vice President, Nuclear Waste Commercial Services, OPG

Carla Carmichael
Vice President, Decommissioning Strategies, OPG

FROM: Ronald Kwan
Assistant Deputy Minister

SUBJECT: **2022 Ontario Nuclear Funds Agreement Reference Plan**

I am writing in follow-up to my memo dated February 4, 2022, to inform you of the Province's response to the proposed 2022 Ontario Nuclear Funds Agreement (ONFA) Reference Plan update.

Based on our review and in accordance with section 5.4.1 of ONFA, the Province approves, effective January 1, 2022, the reference plan submitted by OPG dated as of December 17, 2021. This includes approval for the classification of a portion of the costs for low and intermediate level waste minimization activities as a Decommissioning Eligible Cost, as described in the Reference Plan submitted by OPG.

Provincial approval of a new reference plan constitutes a "Triggering Event" under ONFA, and ONFA prescribes a number of tasks that must be carried out by OPG following a Triggering Event. Staff and I are prepared to work with OPG and provide feedback on OPG's proposed implementation of the calculations mandated by ONFA sections 3.6, 3.7, 3.8 and 4.6.

I look forward to continuing to work with you and other OPG officials and staff in the implementation and administration of ONFA.

Sincerely,

Ronald Kwan

Digitally signed by Ronald
Kwan
Date: 2022.03.01 20:47:09
-05'00'

Ronald Kwan

Cc: Shelley Babin, Chief Legal and Ethics Officer, OPG
John Mauti, Chief Financial Officer and SVP Finance, OPG
Gillian Irwin, Director, Bruce Relationship, OPG
Sydney Pothakos, Policy Advisor, Minister's Office, MOF
Gadi Mayman, CEO, OFA
Christopher Pearce, Director, Strategic Investment and Finance Branch, OFA

Attachment 2

2022 ONTARIO NUCLEAR FUNDS AGREEMENT CONTRIBUTION SCHEDULE

Approved Used Fuel Fund Quarterly Contributions (\$)						
	Pickering A (Units 1-4)	Pickering B (Units 5-8)	Bruce A	Bruce B	Darlington	Total
3/31/2022	6,847,340	(914,739)	(7,216,462)	(2,586,774)	3,870,635	(0)
6/30/2022	6,847,340	(914,739)	(7,216,462)	(2,586,774)	3,870,635	(0)
9/30/2022	6,847,340	(914,739)	(7,216,462)	(2,586,774)	3,870,635	(0)
12/30/2022	6,847,340	(914,739)	(7,216,462)	(2,586,774)	3,870,635	(0)
3/31/2023	6,847,340	(914,739)	(7,216,462)	(2,586,774)	3,870,635	(0)
6/30/2023	6,847,340	(914,739)	(7,216,462)	(2,586,774)	3,870,635	(0)
9/29/2023	6,847,340	(914,739)	(7,216,462)	(2,586,774)	3,870,635	(0)
12/29/2023	6,847,340	(914,739)	(7,216,462)	(2,586,774)	3,870,635	(0)
3/29/2024	6,847,340	(914,739)	(7,216,462)	(2,586,774)	3,870,635	(0)
6/28/2024	6,847,340	(914,739)	(7,216,462)	(2,586,774)	3,870,635	(0)
9/30/2024	6,847,340	(914,739)	(7,216,462)	(2,586,774)	3,870,635	(0)
12/31/2024	6,847,340	(914,739)	(7,216,462)	(2,586,774)	3,870,635	(0)
3/31/2025	6,847,340	(914,739)	(7,216,462)	(2,586,774)	3,870,635	(0)
6/30/2025	6,847,340	(914,739)	(7,216,462)	(2,586,774)	3,870,635	(0)
9/30/2025	6,847,340	(914,739)	(7,216,462)	(2,586,774)	3,870,635	(0)
12/31/2025	6,847,340	(914,739)	(7,216,462)	(2,586,774)	3,870,635	(0)
3/31/2026	6,847,340	(914,739)	(7,216,462)	(2,586,774)	3,870,635	(0)
6/30/2026	6,847,340	(914,739)	(7,216,462)	(2,586,774)	3,870,635	(0)
9/30/2026	6,847,340	(914,739)	(7,216,462)	(2,586,774)	3,870,635	(0)
12/31/2026	6,847,340	(914,739)	(7,216,462)	(2,586,774)	3,870,635	(0)

2022 ONTARIO NUCLEAR FUNDS AGREEMENT CONTRIBUTION SCHEDULE

Approved Decommissioning Fund Quarterly Contributions (\$)						
Date	Pickering A	Pickering B	Bruce A	Bruce B	Darlington	Total
3/31/2022	22,638,032	20,877,673	(24,960,775)	(15,257,430)	(3,297,501)	0
6/30/2022	22,638,032	20,877,673	(24,960,775)	(15,257,430)	(3,297,501)	0
9/30/2022	22,638,032	20,877,673	(24,960,775)	(15,257,430)	(3,297,501)	0
12/30/2022	22,638,032	20,877,673	(24,960,775)	(15,257,430)	(3,297,501)	0
3/31/2023	22,638,032	20,877,673	(24,960,775)	(15,257,430)	(3,297,501)	0
6/30/2023	22,638,032	20,877,673	(24,960,775)	(15,257,430)	(3,297,501)	0
9/29/2023	22,638,032	20,877,673	(24,960,775)	(15,257,430)	(3,297,501)	0
12/29/2023	22,638,032	20,877,673	(24,960,775)	(15,257,430)	(3,297,501)	0
3/29/2024	22,638,032	20,877,673	(24,960,775)	(15,257,430)	(3,297,501)	0
6/28/2024	22,638,032	20,877,673	(24,960,775)	(15,257,430)	(3,297,501)	0
9/30/2024	22,638,032	20,877,673	(24,960,775)	(15,257,430)	(3,297,501)	0
12/31/2024	22,638,032	20,877,673	(24,960,775)	(15,257,430)	(3,297,501)	0
3/31/2025	0	20,877,673	(11,975,513)	(7,320,107)	(1,582,053)	0
6/30/2025	0	20,877,673	(11,975,513)	(7,320,107)	(1,582,053)	0
9/30/2025	0	20,877,673	(11,975,513)	(7,320,107)	(1,582,053)	0
12/31/2025	0	20,877,673	(11,975,513)	(7,320,107)	(1,582,053)	0
3/31/2026	0	0	0	0	0	0
6/30/2026	0	0	0	0	0	0
9/30/2026	0	0	0	0	0	0
12/31/2026	0	0	0	0	0	0

Numbers may not add due to rounding.

Filed: 2025-12-12
 EB-2025-0297
 Exhibit C2
 Tab 1
 Schedule 1
 Table 1

Table 1
 Revenue Requirement Impact of OPG's Nuclear Liabilities (Excluding DNNP Facilities) (\$M)
 Years Ending December 31, 2020 to 2031

Line No.	Description	Note or Reference	2020 Actual	2021 Actual	2022 Actual	2023 Actual	2024 Actual	2025 Budget	2026 Budget	2027 Plan	2028 Plan	2029 Plan	2030 Plan	2031 Plan
			(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
	PRESCRIBED FACILITIES (PICKERING AND DARLINGTON)													
1	Depreciation of Asset Retirement Costs	Ex. C2-1-1 Table 2	82.2	80.4	160.9	160.9	238.8	11.3	11.3	11.3	11.3	11.3	11.3	11.3
2	Used Fuel Storage and Disposal Variable Expenses	Ex. C2-1-1 Table 2	55.2	76.7	82.7	66.5	52.7	58.1	41.8	26.8	38.5	38.0	50.2	54.2
3	Low & Intermediate Level Waste Management Variable Expenses	Ex. C2-1-1 Table 2	8.3	13.1	22.4	20.2	29.5	14.2	11.5	3.6	8.7	20.9	22.7	24.9
	Return on ARC in Rate Base:													
4	Return on Rate Base at Weighted Average Accretion Rate	Ex. C1-1-1 Tables 1-12	19.7	18.3	25.1	14.4	27.9	24.4	9.6	4.7	1.1	0.0	0.0	0.0
5	Return on Rate Base at Weighted Average Cost of Capital	Note 1	0.0	0.0	0.5	3.9	3.0	11.2	17.9	27.3	32.2	33.3	32.7	31.9
6	Pre-Tax Revenue Requirement Impact		165.4	188.5	291.5	265.9	351.9	119.2	92.1	73.7	91.9	103.5	116.9	122.4
7	Income Tax Impact	Note 2	(36.8)	(35.7)	(12.8)	(24.2)	(44.6)	(33.5)	(22.1)	(21.8)	(9.0)	4.3	0.1	(2.6)
8	Total Revenue Requirement Impact - Prescribed Facilities (line 6 + line 7)		128.7	152.8	278.7	241.7	307.3	85.7	70.0	51.9	82.8	107.8	117.0	119.8
	BRUCE FACILITIES													
9	Depreciation of Asset Retirement Costs	Ex. C2-1-1 Table 3	69.2	69.4	52.1	52.1	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
10	Used Fuel Storage and Disposal Variable Expenses	Ex. C2-1-1 Table 3	60.1	84.1	86.9	96.7	59.0	64.9	57.2	68.4	61.1	73.1	69.4	77.7
11	Low & Intermediate Level Waste Management Variable Expenses	Ex. C2-1-1 Table 3	4.0	8.6	10.5	11.3	19.5	18.8	18.5	18.7	15.7	9.2	6.8	10.2
12	Accretion Expense	Ex. C2-1-1 Table 3	504.1	522.3	513.6	534.1	535.7	550.5	567.3	587.8	607.6	626.9	649.5	668.1
13	Less: Segregated Fund Earnings (Losses)	Ex. C2-1-1 Table 3	439.0	431.6	471.3	460.0	473.8	476.7	486.1	500.7	516.6	535.3	556.5	578.7
14	Impact on Bruce Facilities' Income Taxes	Note 3	(49.6)	(63.2)	(48.0)	(58.5)	(46.1)	(50.4)	(50.2)	(54.6)	(52.9)	(54.5)	(53.3)	(55.3)
15	Pre-Tax Revenue Requirement Impact (Impact on Bruce Lease Net Revenues)		148.7	189.6	143.9	175.6	138.3	151.1	150.7	163.7	158.8	163.4	159.9	166.0
16	Income Tax Impact on Revenue Requirement (line 15 x tax rate / (1-tax rate))	Note 4	49.6	63.2	48.0	58.5	46.1	50.4	50.2	54.6	52.9	54.5	53.3	55.3
17	Total Revenue Requirement Impact - Bruce Facilities (line 15 + line 16)		198.3	252.8	191.8	234.1	184.4	201.5	200.9	218.2	211.8	217.9	213.2	221.3
18	Total Revenue Requirement Impact - Prescribed and Bruce Facilities (line 8 + line 17)		327.0	405.6	470.5	475.8	491.7	287.2	270.9	270.2	294.6	325.7	330.2	341.1

Notes:
 See Ex. C2-1-1 Table 1a for notes

Numbers may not add due to rounding.

Filed: 2025-12-12
 EB-2025-0297
 Exhibit C2
 Tab 1
 Schedule 1
 Table 1a

Table 1a
 Revenue Requirement Impact of OPG's Nuclear Liabilities (Excluding DNNP Facilities) (\$M)
 Years Ending December 31, 2020 to 2031
 Notes to Ex. C2-1-1, Table 1

Notes:

1 If average Unfunded Nuclear Liabilities (UNL) is less than average Asset Retirement Costs (ARC) for the prescribed facilities, the funded portion of average ARC (i.e. the amount by which average ARC exceeds average UNL) earns WACC as follows:

Table to Note 1							
Line No.	Year	(from Ex. C2-1-1 Table 2, line 27) Average ARC (\$M)	(from Ex. C2-1-1 Table 2, line 20) Average UNL (\$M)	(a)-(b) ARC-UNL (\$M)	Annual WACC	(c) x (d) if >0 Return on Rate Base (\$M)	WACC Reference
		(a)	(b)	(c)	(d)	(e)	
1a	2020	406.3	549.6	(143.3)	6.44%	0.0	EB-2016-0152 Payment Amounts Order, App. A, Table 14
2a	2021	376.2	433.9	(57.7)	6.43%	0.0	EB-2016-0152 Payment Amounts Order, App. A, Table 15
3a	2022	528.1	519.3	8.9	5.89%	0.5	EB-2020-0290 Payment Amounts Order, App. A, Table 11
4a	2023	367.2	300.2	67.0	5.83%	3.9	EB-2020-0290 Payment Amounts Order, App. A, Table 12
5a	2024	641.4	591.4	50.0	5.90%	3.0	EB-2020-0290 Payment Amounts Order, App. A, Table 13
6a	2025	516.3	327.8	188.5	5.92%	11.2	EB-2020-0290 Payment Amounts Order, App. A, Table 14
7a	2026	505.0	202.5	302.5	5.92%	17.9	EB-2020-0290 Payment Amounts Order, App. A, Table 15
8a	2027	493.6	100.1	393.6	6.93%	27.3	Ex. C1-1-1 Table 5
9a	2028	482.3	23.0	459.3	7.02%	32.2	Ex. C1-1-1 Table 4
10a	2029	471.0	0.0	471.0	7.07%	33.3	Ex. C1-1-1 Table 3
11a	2030	459.6	0.0	459.6	7.11%	32.7	Ex. C1-1-1 Table 2
12a	2031	448.3	0.0	448.3	7.12%	31.9	Ex. C1-1-1 Table 1

2 The income tax impact for prescribed facilities is calculated as follows:

Table to Note 2 (\$M)													
Line No.	Item	2020 Actual	2021 Actual	2022 Actual	2023 Actual	2024 Actual	2025 Budget	2026 Budget	2027 Plan	2028 Plan	2029 Plan	2030 Plan	2031 Plan
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
1b	Regulatory Taxable Income Before Impact of Segregated Fund Contributions (Ex. C2-1-1, Table 1, line 6)	165.4	188.5	291.5	265.9	351.9	119.2	92.1	73.7	91.9	103.5	116.9	122.4
2b	Contributions to Nuclear Segregated Funds for Prescribed Facilities (Ex. C2-1-1 Table 2, line 15)	102.5	102.5	200.1	200.1	200.1	116.4	39.2	0.0	0.0	0.0	0.0	0.0
3b	Expenditures for Used Fuel, Waste Management & Decommissioning (Ex. C2-1-1 Table 2, line 5)	237.8	282.0	247.3	252.7	442.2	604.9	653.5	637.4	539.1	437.9	443.3	472.1
4b	Disbursements from Nuclear Segregated Funds (Ex. C2-1-1 Table 2, line 16)	(64.5)	(88.9)	(117.4)	(114.3)	(156.6)	(501.7)	(534.2)	(498.2)	(420.1)	(347.2)	(326.7)	(342.0)
5b	Net Increase in Regulatory Taxable Income (line 1b - line 2b - line 3b - line 4b)	(110.4)	(107.1)	(38.5)	(72.6)	(133.8)	(100.4)	(66.4)	(65.4)	(27.1)	12.9	0.3	(7.8)
6b	Income Tax Rate (Ex. F4-2-1 Table 3, line 34 for 2020-2026 and Ex. F4-2-1 Table 3d, line 33 for 2027-2031)	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
7b	Income Tax Impact (line 5b x line 6b / (1 - line 6b))	(36.8)	(35.7)	(12.8)	(24.2)	(44.6)	(33.5)	(22.1)	(21.8)	(9.0)	4.3	0.1	(2.6)

3 The impact on Bruce facilities' income taxes relates to higher deductible temporary differences associated with expenses not deductible for tax purposes, as follows:

Table to Note 3 (\$M)													
Line No.	Item	2020 Actual	2021 Actual	2022 Actual	2023 Actual	2024 Actual	2025 Budget	2026 Budget	2027 Plan	2028 Plan	2029 Plan	2030 Plan	2031 Plan
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
1c	Increase in Temporary Differences (Ex. C2-1-1 Table 1, lines 9 through 13)	198.3	252.8	191.8	234.1	184.4	201.5	200.9	218.2	211.8	217.9	213.2	221.3
2c	Income Tax Rate (Ex. G2-2-1 Table 7, line 19 for 2020-2025 and Ex. G2-2-1 Table 8, line 19 for 2026-2031)	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
3c	Impact on Bruce Facilities' Income Taxes (line 1c x line 2c)	(49.6)	(63.2)	(48.0)	(58.5)	(46.1)	(50.4)	(50.2)	(54.6)	(52.9)	(54.5)	(53.3)	(55.3)

4 Income Tax Rate (Ex. F4-2-1 Table 3, line 34 for 2020-2026 and Ex. F4-2-1 Table 3d, line 33 for 2027-2031)

Numbers may not add due to rounding.

Table 1b
 Revenue Requirement Impact of OPG's Nuclear Liabilities (Excluding DNNP Facilities) (\$M)
 Years Ending December 31, 2020 to 2031
Notes to Ex. C2-1-1, Table 1

Notes:

5 The weighted average accretion rate applied to the portion of the prescribed facilities' ARC that does not earn WACC is calculated as follows:

Calculation of Weighted Average Accretion Rate - As at December 31, 2024 ¹					
Line	Asset Retirement Obligation Tranche ²	Year-end Balance (\$M)	Weighting	Accretion Rate	Weighted Average Accretion Rate
No.		(a)	(b)	(c)	(d) = (b) x (c)
5a	Tranche 1	\$14,376	56%	5.75%	3.21%
5b	Tranche 2	\$4,658	18%	4.60%	0.83%
5c	Tranche 3	\$1,273	5%	4.80%	0.24%
5d	Tranche 4	(\$565)	-2%	3.43%	-0.08%
5e	Tranche 5	\$1,555	6%	3.50%	0.21%
5f	Tranche 6	\$3,469	13%	3.21%	0.43%
5g	Tranche 7	(\$2,236)	-9%	4.95%	-0.43%
5h	Tranche 8	\$134	1%	3.20%	0.02%
5i	Tranche 9	\$1,765	7%	2.94%	0.20%
5j	Tranche 10	\$914	4%	2.01%	0.07%
5k	Tranche 11	(\$594)	-2%	4.87%	-0.11%
5l	Tranche 12	\$413	2%	2.45%	0.04%
5m	Tranche 13	\$610	2%	3.93%	0.09%
5n	Total/Weighted average as at year-end ³	\$25,771	100%		4.72%

Notes:

- 1 Numbers may not calculate due to rounding
- 2 Tranches correspond to the following: Tranche 1 = ARO recorded prior to December 31, 2006; Tranche 2 = ARO recorded on December 31, 2006 arising from the approved 2006 ONFA Reference Plan; Tranche 3 = ARO recorded on December 31, 2010 in relation to the decision related to the Darlington refurbishment project; Tranche 4 = ARO recorded on December 31, 2011 arising from the approved 2012 ONFA Reference Plan; Tranche 5 = ARO recorded on December 31, 2012 arising from the approved 2012 ONFA Reference Plan; Tranche 6 = ARO recorded on December 31, 2015 to reflect changes in station end-of-life dates (mainly Bruce); Tranche 7 = ARO recorded on December 31, 2016 arising from the approved 2017 ONFA Reference Plan; Tranche 8 = variables expenses recorded subsequent to Tranche 7; Tranche 9 = ARO recorded on December 31, 2017 to reflect changes in Pickering end-of-life dates; Tranche 10 = ARO recorded on December 31, 2020 to reflect changes in Pickering Units 1 & 4 end-of-life dates; Tranche 11 = ARO recorded on December 31, 2021 arising from the approved 2022 ONFA Reference Plan; Tranche 12 = ARO recorded on December 31, 2023 to reflect changes in Pickering Units 5-8 end-of-life dates.
- 3 Represents OPG's total nuclear ARO excluding consolidation adjustments.

Table 2
 Prescribed Facilities (Pickering and Darlington) - Asset Retirement Obligation, Nuclear Segregated Funds, and Asset Retirement Costs (\$M)
 Years Ending December 31, 2020 to 2031

Line No.	Description	Note	2020 Actual	2021 Actual	2022 Actual	2023 Actual	2024 Actual	2025 Budget	2026 Budget	2027 Plan	2028 Plan	2029 Plan	2030 Plan	2031 Plan
			(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
ASSET RETIREMENT OBLIGATION														
1	Opening Balance	1	10,412.2	10,837.9	11,486.6	11,941.4	12,988.8	13,277.0	13,392.9	13,448.3	13,515.2	13,715.1	14,040.7	14,389.0
2	Used Fuel Storage and Disposal Variable Expenses	2	55.2	76.7	82.7	66.5	52.7	58.1	41.8	26.8	38.5	38.0	50.2	54.2
3	Low & Intermediate Level Waste Management Variable Expenses	3, 6	8.3	13.1	22.4	20.2	29.5	14.2	11.5	3.6	8.7	20.9	22.7	24.9
4	Accretion Expense		550.6	570.4	600.5	616.4	652.1	648.5	655.6	673.9	691.8	704.6	718.7	724.9
5	Expenditures for Used Fuel, Waste Management & Decommissioning		(237.8)	(282.0)	(247.3)	(252.7)	(442.2)	(604.9)	(653.5)	(637.4)	(539.1)	(437.9)	(443.3)	(472.1)
6	Consolidation and Other Adjustments		(1.7)	(2.1)	(3.4)	(1.5)	(3.9)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Closing Balance Before Year-End Adjustments (lines 1 through 6)		10,786.7	11,214.0	11,941.4	12,390.3	13,277.0	13,392.9	13,448.3	13,515.2	13,715.1	14,040.7	14,389.0	14,720.9
8	2022 ONFA Reference Plan Adjustment	4	0.0	272.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	Year-End 2020 and 2023 Adjustment Reflecting Nuclear Station End of Life Changes	5	51.1	0.0	0.0	598.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	Closing Balance (line 7 through 9)		10,837.9	11,486.6	11,941.4	12,988.8	13,277.0	13,392.9	13,448.3	13,515.2	13,715.1	14,040.7	14,389.0	14,720.9
11	Average Asset Retirement Obligation ((line 1 + line 7)/2)		10,599.5	11,025.9	11,714.0	12,165.9	13,132.9	13,335.0	13,420.6	13,481.8	13,615.2	13,877.9	14,214.9	14,555.0
NUCLEAR SEGREGATED FUNDS BALANCE														
12	Opening Balance	1	9,780.0	10,319.7	10,864.3	11,525.2	12,206.3	12,876.8	13,137.5	13,298.6	13,464.7	13,719.5	14,062.2	14,443.6
13	Earnings (Losses)		501.7	531.0	578.1	595.3	627.1	646.0	656.1	664.3	674.9	689.9	708.1	727.3
14	Contributions		102.5	102.5	200.1	200.1	200.1	116.4	39.2	0.0	0.0	0.0	0.0	0.0
15	Disbursements		(64.5)	(88.9)	(117.4)	(114.3)	(156.6)	(501.7)	(534.2)	(498.2)	(420.1)	(347.2)	(326.7)	(342.0)
16	Closing Balance (line 13 through 15)		10,319.7	10,864.3	11,525.2	12,206.3	12,876.8	13,137.5	13,298.6	13,464.7	13,719.5	14,062.2	14,443.6	14,828.9
17	Average Nuclear Segregated Funds Balance ((line 13 + line 16)/2)		10,049.9	10,592.0	11,194.8	11,865.7	12,541.5	13,007.1	13,218.1	13,381.7	13,592.1	13,890.8	14,252.9	14,636.3
UNFUNDED NUCLEAR LIABILITY BALANCE (UNL)														
18	Opening Balance (line 1 - line 12)		632.1	518.1	622.2	416.3	782.5	400.2	255.4	149.7	50.5	(4.4)	(21.5)	(54.6)
19	Closing Balance (line 7 - line 16)		467.0	349.7	416.3	184.1	400.2	255.4	149.7	50.5	(4.4)	(21.5)	(54.6)	(108.0)
20	Average Unfunded Nuclear Liability Balance ((line 18 + line 19)/2)		549.6	433.9	519.3	300.2	591.4	327.8	202.5	100.1	23.0	(12.9)	(38.0)	(81.3)
ASSET RETIREMENT COSTS (ARC)														
21	Opening Balance	1	447.4	416.3	608.6	447.6	760.8	522.0	510.7	499.3	488.0	476.6	465.3	453.9
22	Depreciation Expense		(82.2)	(80.4)	(160.9)	(160.9)	(238.8)	(11.3)	(11.3)	(11.3)	(11.3)	(11.3)	(11.3)	(11.3)
23	Closing Balance Before Year-End Adjustments (line 21 + line 22)		365.2	336.0	447.6	286.7	522.0	510.7	499.3	488.0	476.6	465.3	453.9	442.6
24	2022 ONFA Reference Plan Adjustments	4	0.0	272.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
25	Year-End 2020 and 2023 Adjustment Reflecting Nuclear Station End of Life Changes	5	51.1	0.0	0.0	474.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	Closing Balance (line 23 + line 24 + line 25)		416.3	608.6	447.6	760.8	522.0	510.7	499.3	488.0	476.6	465.3	453.9	442.6
27	Average Asset Retirement Costs ((line 21 + line 23)/2)		406.3	376.2	528.1	367.2	641.4	516.3	505.0	493.6	482.3	471.0	459.6	448.3
28	LESSER OF AVERAGE UNL OR ARC (lesser of line 20 or line 27, if >0)		406.3	376.2	519.3	300.2	591.4	327.8	202.5	100.1	23.0	0.0	0.0	0.0

Notes:

- Opening balances in col. (a) from EB-2020-0290, Ex. C2-1-1 Table 2, col. (e).
- Includes expenses associated with full loads of new fuel into the reactors of refurbished units prior to start-up (discussed in Ex. F2-5-1 section 2.0).
- Includes expenses associated with OM&A costs charged to the Darlington Refurbishment Program and Pickering Refurbishment Program for disposal of low and intermediate level waste (Ex. F2-7-1, Table 1; Ex. F2-8-1, Table 1).
- Adjustment recorded on December 31, 2021 associated with the current approved ONFA Reference Plan effective January 1, 2022. See Ex. C2-1-1 Table 4, line 11, col. (d) and line 13, col. (d) for further details.
- Adjustment recorded on December 31, 2020 and December 31, 2023 reflecting the changes to station end-of-life date assumptions underlying the ARO and ARC calculations, consistent with the EB-2020-0290 Payment Amounts Order, Appendix F, p.1. See Ex. C2-1-1 Table 4, line 6, col.(d) and line 7, col.(d) for 2020, and line 20, col.(d) and line 22 col.(d) for 2023, for further details.
- Reflects updated calculations of the dollar per cubic metre cost rates for low and intermediate level waste based on the 2022 ONFA Reference Plan.

Table 3
 Bruce Facilities - Asset Retirement Obligation, Nuclear Segregated Funds, and Asset Retirement Costs (\$M)
 Years Ending December 31, 2020 to 2031

Line No.	Description	Note	2020 Actual	2021 Actual	2022 Actual	2023 Actual	2024 Actual	2025 Budget	2026 Budget	2027 Plan	2028 Plan	2029 Plan	2030 Plan	2031 Plan
			(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)
ASSET RETIREMENT OBLIGATION														
1	Opening Balance	1	11,361.4	11,766.7	11,611.0	12,068.1	12,110.4	12,472.33	12,862.9	13,223.6	13,604.7	13,986.9	14,439.2	14,910.3
2	Used Fuel Storage and Disposal Variable Expenses		60.1	84.1	86.9	96.7	59.0	64.9	57.2	68.4	61.1	73.1	69.4	77.7
3	Low & Intermediate Level Waste Management Variable Expenses	4	4.0	8.6	10.5	11.3	19.5	18.8	18.5	18.7	15.7	9.2	6.8	10.2
4	Accretion Expense		504.1	522.3	513.6	534.1	535.7	550.5	567.3	587.8	607.6	626.9	649.5	668.1
5	Expenditures for Used Fuel, Waste Management & Decommissioning		(174.4)	(168.6)	(150.5)	(159.5)	(249.1)	(243.6)	(282.3)	(293.8)	(302.2)	(256.9)	(254.6)	(228.6)
6	Consolidation and Other Adjustments		(1.4)	(2.1)	(3.4)	(1.5)	(3.1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Closing Balance Before Year-End Adjustments (lines 1 through 6)		11,753.7	12,210.9	12,068.1	12,549.2	12,472.3	12,862.9	13,223.6	13,604.7	13,986.9	14,439.2	14,910.3	15,437.7
8	2022 ONFA Reference Plan Adjustments	2	0.0	(599.9)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	Year-End 2020 and 2023 Adjustment Reflecting Nuclear Station End of Life Changes	3	13.0	0.0	0.0	(438.7)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	Closing Balance (line 7 through 9)		11,766.7	11,611.0	12,068.1	12,110.4	12,472.3	12,862.9	13,223.6	13,604.7	13,986.9	14,439.2	14,910.3	15,437.7
11	Average Asset Retirement Obligation ((line 1 + line 7)/2)		11,557.5	11,988.8	11,839.5	12,308.6	12,291.4	12,667.6	13,043.3	13,414.2	13,795.8	14,213.1	14,674.8	15,174.0
NUCLEAR SEGREGATED FUNDS BALANCE														
12	Opening Balance	1	8,512.6	8,776.4	9,011.8	9,181.0	9,356.9	9,535.6	9,676.3	9,952.7	10,257.4	10,587.0	11,003.9	11,430.5
13	Earnings (Losses)		439.0	431.6	471.3	460.0	473.8	476.7	486.1	500.7	516.6	535.3	556.5	578.7
14	Contributions		(102.5)	(102.5)	(200.1)	(200.1)	(200.1)	(116.4)	(39.2)	0.0	0.0	0.0	0.0	0.0
15	Disbursements		(72.7)	(93.7)	(102.0)	(84.0)	(95.0)	(219.6)	(170.5)	(196.0)	(187.0)	(118.4)	(129.9)	(122.0)
16	Closing Balance (line 12 through 15)		8,776.4	9,011.8	9,181.0	9,356.9	9,535.6	9,676.3	9,952.7	10,257.4	10,587.0	11,003.9	11,430.5	11,887.2
17	Average Nuclear Segregated Funds Balance ((line 12 + line 16)/2)		8,644.5	8,894.1	9,096.4	9,269.0	9,446.3	9,606.0	9,814.5	10,105.1	10,422.2	10,795.4	11,217.2	11,658.9
ASSET RETIREMENT COSTS (ARC)														
18	Opening Balance	1	2,816.0	2,759.7	2,090.4	2,038.3	1,671.9	1,627.9	1,583.9	1,539.9	1,495.9	1,451.9	1,407.9	1,363.9
19	Depreciation Expense		(69.2)	(69.4)	(52.1)	(52.1)	(44.0)	(44.0)	(44.0)	(44.0)	(44.0)	(44.0)	(44.0)	(44.0)
20	Closing Balance Before Year-End Adjustments (line 18 + line 19)		2,746.7	2,690.3	2,038.3	1,986.2	1,627.9	1,583.9	1,539.9	1,495.9	1,451.9	1,407.9	1,363.9	1,319.9
21	2022 ONFA Reference Plan Adjustment	2	0.0	(599.9)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	Year-End 2020 and 2023 Adjustment Reflecting Nuclear Station End of Life Changes	3	13.0	0.0	0.0	(314.3)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	Closing Balance (line 20 + line 21 + line 22)		2,759.7	2,090.4	2,038.3	1,671.9	1,627.9	1,583.9	1,539.9	1,495.9	1,451.9	1,407.9	1,363.9	1,319.9
24	Average Asset Retirement Costs ((line 18 + line 20)/2))		2,781.4	2,725.0	2,064.3	2,012.3	1,649.9	1,605.9	1,561.9	1,517.9	1,473.9	1,429.9	1,385.9	1,341.9

Notes:

- Opening balances in col. (a) from EB-2020-0290, Ex. C2-1-1 Table 3, col. (e).
- Adjustment recorded on December 31, 2021 associated with the current approved ONFA Reference Plan effective January 1, 2022. See Ex. C2-1-1 Table 4, line 13, col.(g) and line 14, col.(g) for further details.
- Adjustment recorded on December 31, 2020 and December 31, 2023 reflecting the changes to station end-of-life date assumptions underlying the ARO and ARC calculations, consistent with the EB-2020-0290 Payment Amounts Order, Appendix F, p.1. See Ex. C2-1-1, Table 4, line 6, col. (g) and line 7, col. (g) for 2020, and line 20, col. (g) and line 22, col. (g) for 2023, for further details.
- Reflects updated calculations of the dollar per cubic metre cost rates for low and intermediate level waste based on the 2022 ONFA Reference Plan.

Table 4
Impact of Year End 2020 Adjustment - Assignment of ARO Adjustment and Allocation of ARC to Nuclear Stations (\$M)¹

Line No.	Particulars	Pickering Unit 1 & 4	Pickering Unit 5 - 8	Darlington	(a) + (b) + (c) Prescribed Facilities Total	Bruce A	Bruce B	(e) + (f) Bruce Facilities Total	(d) + (g) OPG Total
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
	December 31, 2020 Actual:								
1	Decommissioning Program	(5.7)	2.0	1.2	(2.6)	0.1	0.2	0.3	(2.2)
2	Low and Intermediate Level Waste Storage Program	2.1	(3.5)	(12.1)	(13.5)	(1.8)	(1.0)	(2.8)	(16.3)
3	Low and Intermediate Level Waste Disposal Program	9.0	5.6	(4.1)	10.5	(4.7)	(5.6)	(10.3)	0.2
4	Used Fuel Disposal Program	65.1	12.5	13.5	91.1	(14.0)	31.5	17.4	108.5
5	Used Fuel Storage Program	(20.1)	(11.0)	(3.3)	(34.4)	4.6	3.6	8.3	(26.1)
6	ARO Adjustment Assignment to Station Level	50.4	5.6	(4.8)	51.1	(15.7)	28.7	13.0	64.1
7	Asset Retirement Cost Adjustment	50.4	5.6	(4.8)	51.1	(15.7)	28.7	13.0	64.1

Notes:

1 As shown in EB-2020-0290, Ex. L-F4-01-Staff-271, Att. 1, Table 1, and in EB-2023-0336, Ex. H1-1-1, Table 18a, rows 1a to 7a.

Impact of 2022 ONFA Reference Plan (Year End 2021) Adjustment - Assignment of ARO Adjustment and Allocation of ARC to Nuclear Stations (\$M)²

Line No.	Particulars	Pickering Units 1 & 4	Pickering Units 5 - 8	Darlington	(a) + (b) + (c) Prescribed Facilities Total	Bruce A	Bruce B	(e) + (f) Bruce Facilities Total	(d) + (g) OPG Total
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
	December 31, 2021 Actual:								
8	Decommissioning Program	318.7	151.8	53.1	523.6	(13.7)	(5.8)	(19.5)	504.2
9	Low and Intermediate Level Waste Storage Program	61.3	55.3	103.9	220.5	48.2	(7.9)	40.3	260.8
10	Low and Intermediate Level Waste Disposal Program	(113.9)	(186.1)	(112.4)	(412.4)	(204.6)	(114.1)	(318.7)	(731.1)
11	Used Fuel Disposal Program	(34.5)	(51.4)	(129.2)	(215.0)	(193.6)	(174.5)	(368.1)	(583.1)
12	Used Fuel Storage Program	23.1	13.9	118.8	155.8	35.0	31.0	66.0	221.8
13	ARO Adjustment Assignment to Station Level	254.8	(16.5)	34.2	272.6	(328.7)	(271.2)	(599.9)	(327.3)
14	Asset Retirement Cost Adjustment	254.8	(16.5)	34.2	272.6	(328.7)	(271.2)	(599.9)	(327.3)

Notes:

2 As shown in EB-2023-0336, Ex. H1-1-1, Table 18a, rows 1b to 7b.

Impact of Year End 2023 Adjustment - Assignment of ARO Adjustment and Allocation of ARC to Nuclear Stations (\$M)

Line No.	Particulars	Pickering Units 1 & 4	Pickering Units 5 - 8	Darlington	(a) + (b) + (c) Prescribed Facilities Total	Bruce A	Bruce B	(e) + (f) Bruce Facilities Total	(d) + (g) OPG Total
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
	December 31, 2023 Actual:								
15	Decommissioning Program	195.2	(1,013.4)	(14.2)	(832.4)	(11.4)	(12.8)	(24.2)	(856.6)
16	Low and Intermediate Level Waste Storage Program	4.9	179.3	10.0	194.1	6.4	4.9	11.4	205.5
17	Low and Intermediate Level Waste Disposal Program	(4.2)	124.8	7.9	128.5	(28.3)	(8.5)	(36.7)	91.7
18	Used Fuel Disposal Program	(23.9)	1,301.2	(135.2)	1,142.1	(165.4)	(237.4)	(402.7)	739.4
19	Used Fuel Storage Program	(6.8)	(38.3)	11.3	(33.8)	2.4	11.1	13.5	(20.2)
20	ARO Adjustment Assignment to Station Level	165.3	553.5	(120.4)	598.5	(196.2)	(242.6)	(438.7)	159.7
21	Reallocation of Negative Net Book Value of Stations ³	(51.0)	(62.9)	(10.6)	(124.4)	221.5	(97.1)	124.4	0.0
22	Asset Retirement Cost Adjustment	114.3	490.7	(130.9)	474.1	25.3	(339.7)	(314.3)	159.7

Notes:

3 The net book value of Bruce A asset retirement costs after allocation of \$196.2M in negative ARC on December 31, 2023 would have been negative \$221.5M. The negative value is reallocated to the remaining nuclear facilities per US GAAP based on the proportional value of post-adjustment ARO by station as at December 31, 2023 excluding Bruce A, post-adjustment. The net book value of Darlington asset retirement costs after such reallocation would be a negative \$39.0M asset retirement cost, which in turn is reallocated to the remaining nuclear facilities on the same basis, excluding Bruce A and Darlington, post-adjustment.

Numbers may not add due to rounding.

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 EB-2025-0297
 Exhibit C2
 Tab 1
 Schedule 1
 Table 5

Table 5
 Change in Pickering End-of-Life Date to 2070 Impact on Nuclear Liabilities Costs - IR Term Revenue Requirement (\$M)
 Years Ending December 31, 2027 to 2031

Line No.	Description	Note or Reference (for cols. (a) to (e))	With Change in Pickering End-of-Life Date					Note or Reference (for cols. (f) to (j))	Without Change in Pickering End-of-Life Date ¹					Sum (a) to (e) less Sum (f) to (j) Impact on Nuclear Liabilities Costs
			2027 Plan	2028 Plan	2029 Plan	2030 Plan	2031 Plan		2027 Plan	2028 Plan	2029 Plan	2030 Plan	2031 Plan	
			(a)	(b)	(c)	(d)	(e)		(f)	(g)	(h)	(i)	(j)	
	PRESCRIBED FACILITIES (PICKERING AND DARLINGTON)													
1	Depreciation of Asset Retirement Costs	Ex. C2-1-1 Table 1	11.3	11.3	11.3	11.3	11.3	Note 2	4.5	4.5	4.5	4.5	4.5	34.2
2	Used Fuel Storage and Disposal Variable Expenses	Ex. C2-1-1 Table 1	26.8	38.5	38.0	50.2	54.2	Note 8	41.9	59.4	57.7	74.8	79.5	(105.6)
3	Low & Intermediate Level Waste Management Variable Expenses	Ex. C2-1-1 Table 1	3.6	8.7	20.9	22.7	24.9	Note 8	4.7	11.0	28.0	29.9	32.3	(25.0)
	Return on ARC in Rate Base													
4	Return on Rate Base at Weighted Average Accretion Rate	Ex. C2-1-1 Table 1	4.7	1.1	0.0	0.0	0.0	Note 3	0.0	0.0	0.0	0.0	0.0	5.8
5	Return on Rate Base at Weighted Average Cost of Capital	Ex. C2-1-1 Table 1	27.3	32.2	33.3	32.7	31.9	Note 3	7.9	7.7	7.5	7.2	6.9	120.2
6	Pre-Tax Revenue Requirement Impact		73.7	91.9	103.5	116.9	122.4		59.1	82.6	97.6	116.4	123.2	29.6
7	Income Tax Impact	Ex. C2-1-1 Table 1	(21.8)	(9.0)	4.3	0.1	(2.6)	Note 4	(26.7)	(12.1)	2.3	(0.1)	(2.3)	9.9
8	Total Revenue Requirement Impact - Prescribed Facilities (line 6 + line 7)		51.9	82.8	107.8	117.0	119.8		32.4	70.4	99.9	116.3	120.9	39.5
	BRUCE FACILITIES													
9	Depreciation of Asset Retirement Costs	Ex. C2-1-1 Table 1	44.0	44.0	44.0	44.0	44.0	Note 5	52.1	52.1	52.1	52.1	52.1	(40.3)
10	Used Fuel Storage and Disposal Variable Expenses	Ex. C2-1-1 Table 1	68.4	61.1	73.1	69.4	77.7	Note 8	108.0	95.2	112.2	105.0	115.9	(186.6)
11	Low & Intermediate Level Waste Management Variable Expenses	Ex. C2-1-1 Table 1	18.7	15.7	9.2	6.8	10.2	Note 8	26.7	21.4	12.0	8.9	12.9	(21.4)
12	Accretion	Ex. C2-1-1 Table 1	587.8	607.6	626.9	649.5	668.1		600.7	620.7	640.8	664.9	685.2	(72.4)
13	Less: Segregated Fund Earnings (Losses)	Ex. C2-1-1 Table 1	500.7	516.6	535.3	556.5	578.7		500.7	516.6	535.3	556.5	578.7	0.0
14	Impact on Bruce Facilities' Income Taxes		(54.6)	(52.9)	(54.5)	(53.3)	(55.3)	Note 6	(71.7)	(68.2)	(70.4)	(68.6)	(71.9)	
15	Pre-Tax Revenue Requirement Impact (lines 9 through 12 minus 13 plus 14)		163.7	158.8	163.4	159.9	166.0		215.1	204.6	211.3	205.8	215.6	(240.6)
16	Income Tax Impact	Ex. C2-1-1 Table 1	54.6	52.9	54.5	53.3	55.3	Note 7	71.7	68.2	70.4	68.6	71.9	(80.2)
17	Total Revenue Requirement Impact - Bruce Facilities (line 15 + line 16)		218.2	211.8	217.9	213.2	221.3		286.8	272.8	281.7	274.4	287.4	(320.8)
18	Total Revenue Requirement Impact - Prescribed and Bruce Facilities (line 8 + line 17)		270.2	294.6	325.7	330.2	341.1		319.1	343.2	381.7	390.6	408.4	(281.3)

Note:
 See C2-1-1 Table 5a for notes

Table 5a
 Impact of Change in Pickering End-of-Life Date to 2070 on Nuclear Liabilities Costs - IR Term Revenue Requirement (\$M)
 Years Ending December 31, 2027 to 2031
 Notes to Ex. C2-1-1, Table 5

Notes:

1 "Without Change in Pickering Station End-of-Life Date" amounts are presented for illustrative purposes and are derived from a base case using the same assumptions for baseline cost estimates, discount rates and end-of-life dates as those underlying amounts reflected in this application, with the exception of the Pickering end-of-life date change to 2070 effective December 31, 2023.

2 A continuity of ARC balances for the Prescribed Facilities in the illustrative case "Without Changes in Nuclear Station End-of-Life Dates" is as estimated as follows:

Line No.	Amounts Without Change in Pickering End-of-Life Date	2024 Actual	2025 Budget	2026 Budget	2027 Plan	2028 Plan	2029 Plan	2030 Plan	2031 Plan
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
1a	ARC Opening Balance (col. (a) from Ex. C2-1-1 Table 2, line 23, col. (d))	286.7	125.8	121.3	116.8	112.3	107.8	103.2	98.7
2a	Depreciation Expense (col. (a): Ex. C2-1-1, Table 2, line 22, col. (d))	(160.9)	(4.5)	(4.5)	(4.5)	(4.5)	(4.5)	(4.5)	(4.5)
3a	ARC Closing Balance (line 1a - line 2a)	125.8	121.3	116.8	112.3	107.8	103.2	98.7	94.2
4a	Average ARC ((line 1a + line 3a) / 2)	206.3	123.6	119.1	114.5	110.0	105.5	101.0	96.5

3 If average UNL is less than average ARC for the prescribed facilities, the funded portion of average ARC (i.e., the amount by which average ARC exceeds average UNL) earns WACC as shown. The lesser of ARC and UNL earns the weighted average accretion rate as shown.

Line No.	Year	Average ARC Without Change in Pickering Station End-of-Life Date (\$M)+	Average UNL Without Change in Pickering Station End-of-Life Date (\$M)	(a)-(b) ARC-UNL (\$M)	Annual WACC**	(c) x (d) if >0 Return on Rate Base (\$M)	Weighted Average Accretion Rate	(f) x lesser of (a) and (b) Return on Rate Base (\$M) (f) x lesser of (a) and (b) Return on Rate Base (\$M)
		(a)	(b)	(c)	(d)	(e)	(f)	(g)
1b	2027	114.5	0.0	114.5	6.93%	7.9	4.74%	5.4
2b	2028	110.0	0.0	110.0	7.02%	7.7	4.74%	5.2
3b	2029	105.5	0.0	105.5	7.07%	7.5	4.74%	5.0
4b	2030	101.0	0.0	101.0	7.11%	7.2	4.74%	4.8
5b	2031	96.5	0.0	96.5	7.12%	6.9	4.74%	4.6

+ From Note 2, line 4a

++ Table 1a, Note 1, col. (d)

4 The income tax impact for prescribed facilities in the illustrative case "Without Changes in Pickering Station End-of-Life Date" is calculated as follows:

Line No.	Item	2027 Plan	2028 Plan	2029 Plan	2030 Plan	2031 Plan
		(b)	(c)	(d)	(e)	(f)
1c	Regulatory Taxable Income Before Impact of Segregated Fund Contributions (Ex. C2-1-1, Table 5, line 6)	59.1	82.6	97.6	116.4	123.2
2c	Contributions to Segregated Funds for Prescribed Facilities (Ex. C2-1-1 Table 2, line 14)	0.0	0.0	0.0	0.0	0.0
3c	Expenditures for Used Fuel, Waste Management & Decommissioning (Ex. C2-1-1, Table 2, line 5)	637.4	539.1	437.9	443.3	472.1
4c	Disbursements from Nuclear Segregated Funds (Ex. C2-1-1 Table 2, line 15)	(498.2)	(420.1)	(347.2)	(326.7)	(342.0)
5c	Net Increase in Regulatory Taxable Income (line 1c - line 2c - line 3c - line 4c)	(80.1)	(36.4)	7.0	(0.3)	(6.9)
6c	Income Tax Rate (Ex. F4-2-1 Table 3d, line 33)	25.00%	25.00%	25.00%	25.00%	25.00%
7c	Income Tax Impact (line 5c x line 6c / (1 - line 6c))	(26.7)	(12.1)	2.3	(0.1)	(2.3)

5 From Ex. C2-1-1 Table 3, line 20, col. (d)

6 The impact on Bruce facilities' income taxes relates to higher deductible temporary differences associated with expenses not deductible for tax purposes, as follows:

Line No.	Item	2027 Plan	2028 Plan	2029 Plan	2030 Plan	2031 Plan
		(b)	(c)	(d)	(e)	(f)
1d	Increase in Temporary Differences (Ex. C2-1-1 Table 5, lines 9 through 13)	286.8	272.8	281.7	274.4	287.4
2d	Income Tax Rate (Ex. G2-2-1 Table 8, line 19)	25.00%	25.00%	25.00%	25.00%	25.00%
3d	Impact on Bruce Facilities' Income Taxes (line 1d x line 2d)	(71.7)	(68.2)	(70.4)	(68.6)	(71.9)

7 Income Tax Rate (Ex. F4-2-1 Table 3d, line 33)

8 Used fuel and low and intermediate level waste expenses in the "illustrative" scenario are derived using the discount rate in effect immediately prior to the year-end 2023 ARO/ARC adjustment.