2018

DEPRECIATION REVIEW COMMITTEE RECOMMENDATIONS

FOR

NUCLEAR

DECEMBER 2018

MEMORANDUM **December 2018**

2018 Depreciation Review Committee Recommendations – Nuclear

PURPOSE AND SUMMARY

This memorandum is intended to obtain approval for the recommendations resulting from the 2018 Depreciation Review Committee (DRC) review of the average service lives of the selected asset classes and the station service lives for OPG's nuclear facilities. The nuclear facilities are the Pickering Nuclear Generating Station, the Darlington Nuclear Generating Station and the Bruce Nuclear Generating Stations.

The 2018 DRC makes the following recommendations for depreciation purposes.

Station Service Lives

The DRC has confirmed with the nuclear business units that no new information became available in 2018 that would require any change in the station end-of-life (EOL) dates of the nuclear stations. There is no recommendation for changing the station EOL dates of the nuclear stations. The following average nuclear station EOL dates remain effective from December 31, 2017.

Darlington	December 31, 2052
Pickering Units 1 and 4	December 31, 2022
Pickering Units 5-8	December 31, 2024
Bruce A	December 31, 2052
Bruce B	December 31, 2061

Selected Nuclear Asset Classes

Asset Class	Recommendation
15200000 – Nuclear Buildings and Structures	No change to average service life
15340000 – Nuclear Process Systems	No change to average service life
15411100 – Nuclear Turbine Auxiliary Equipment, Steam Reheater Tube – PB&DG	No change to average service life
15421000 – Nuclear Generator Rotors, Stators & Auxiliary Systems – PB & DG	No change to average service life
15561000 – Nuclear AC Standby Power – PB & DG	No change to average service life
15600000 – Nuclear Instruments and Controls	No change to average service life
15720000 – Nuclear Common Service Systems	No change to average service life
15991200 – Nuclear Large Motors	No change to average service life

These asset class average service life recommendations will result in no change to the annual depreciation expense for the nuclear facilities.

2018 Depreciation Review Committee Recommendations – Nuclear

BACKGROUND

The DRC convenes annually to review the service lives for depreciation purposes of OPG's major facilities and/or a selection of asset classes in those facilities, with the general objective of reviewing all significant asset classes over a five year period. OPG's practice of reviewing asset classes over an approximate five-year cycle to re-evaluate the average service life estimates was considered appropriate by Gannett Fleming ULC (GF), an external consultant. In the recommendation section of the report dated November 29, 2013 that was accepted by the Ontario Energy Board (OEB) as part of OPG's application for 2014/15 payment amounts, GF noted "[c]ontinued surveillance and periodic revisions are required to maintain use of appropriate average service lives and depreciation rates. Each [asset class] account should be subjected to a complete depreciation study to re-evaluate its average service life estimates periodically. Gannett Fleming notes that the practice of OPG to review its various asset accounts and depreciation service lives over an approximate five-year cycle meets this common depreciation practice." This is the first year of the current five year review period.

OPG plans to conduct the next independent study after the refurbished Darlington Generating Station (GS) Unit 2 is returned to service which is anticipated to be in February 2020. This would allow for the substantial in-service additions associated with the Unit 2 return to service to be reviewed, and more recent information to be provided to the rate-setting process for OPG's next incentive rate-setting term starting in 2022. In its December 2017 decision and order on OPG's 2017-2021 rate application, the OEB indicated that it does not have concerns with this approach.

SCOPE OF 2018 DRC REVIEW FOR NUCLEAR

The focus of the 2018 DRC for the nuclear business was on reviewing a selection of nuclear asset class service lives. The review focused on the following main areas:

Asset Class Review

Eight nuclear Major Fixed Asset classes were selected for the 2018 DRC review. The asset classes reviewed were determined based on a selection of higher value asset classes (greater than $5M) that had not been reviewed by the DRC in the last two years and assets identified for review by business unit/site contacts based on operational knowledge.

Sources of Information

The main sources of information considered by the DRC in developing the recommendations included:

- reviews conducted primarily by technical staff in the nuclear business unit;
- information obtained from past DRC reviews; and
- industry experience.

2018 Depreciation Review Committee Recommendations – Nuclear

SUMMARY OF RECOMMENDATIONS

Asset Class Review

The 2018 DRC review of the average service lives of the nuclear facilities determined that the currently approved average service life estimates for all reviewed asset classes remain appropriate. These recommendations were reviewed with and endorsed by business and technical staff responsible for overseeing the nuclear assets. Below is a summary of conclusions for the reviewed asset classes:

Asset Class	Recommendation
15200000 – Nuclear Buildings and Structures	Retain the current service life of 55 years
15340000 – Nuclear Process Systems	Retain the current service life of 55 years
15411100 – Nuclear Turbine Auxiliary Equipment, Steam Reheater Tube – PB&DG	Retain the current service life of 55 years
15421000 – Nuclear Generator Rotors, Stators & Auxiliary Systems – PB & DG	Retain the current service life of 55 years
15561000 – Nuclear AC Standby Power – PB & DG	Retain the current service life of 55 years
15600000 – Nuclear Instruments and Controls	Retain the current service life of 15 years
15720000 – Nuclear Common Service Systems	Retain the current service life of 35 years
15991200 – Nuclear Large Motors	Retain the current service life of 30 years

These asset class average service life recommendations will result in no change to the annual nuclear depreciation expense.

DRC MEMBERS AND APPROVALS COMMITTEE

The DRC includes representatives from the operating business units as well as representatives having experience in finance and accounting, investment planning, and rate regulation.

The Approvals Committee is responsible for approving the DRC recommendations and, as it relates to the nuclear business, is comprised of the following individuals:

Name	Position
Sean Granville	Chief Nuclear Officer
Ken Hartwick	Chief Financial Officer and Senior Vice President, Finance
Chris Ginther	Chief Administrative Officer

The DRC is comprised of the following members:

Name	Position
Cynthia Domjancic	Vice President, Controllership
Michael Gore	Director, External Reporting and Accounting Policy
Jenny Jorda	Senior Manager, Accounting and Reporting
Alex Kogan	Vice President, Business Planning and Reporting
John Mauti	Vice President, Chief Controller & Accounting Officer
Randy Pugh	Director, Ontario Regulatory Affairs
Stefan Surdu	Senior Manager, Investment Management, Nuclear Finance

The Key Technical Contacts are:

Name	Position
Stefan Surdu (Technical Coordinator for Nuclear)	Senior Manager, Investment Management, Nuclear Finance