COMPARISON OF BASE OM&A – NUCLEAR

1.0 PURPOSE

This evidence presents period-over-period comparisons of base OM&A costs for the nuclear facilities for 2013-2021, in support of the approval of OPG’s forecast base OM&A costs for the test period.

2.0 OVERVIEW

Base OM&A costs are forecast to increase from 2015 Actual to 2021 Plan by $116.7M. The primary drivers for this increase are purchased services and labour escalation reflecting collective agreement provisions. Purchased services increase to fund work programs to maintain asset reliability and address equipment aging issues. Labour costs are discussed further in Ex. F4-3-1.

Period-over-period changes are presented in Ex. F2-2-2 Table 1. Net reportable variances and period-over-period changes (10 per cent or greater at the function level, subject to a minimum materiality limit of $1M) are discussed below.

3.0 PERIOD-OVER-PERIOD CHANGES – TEST YEARS

2017 Plan versus 2016 Budget

Planned base OM&A in 2017 is $1,210.6M, which is $8.8M (0.7 per cent) higher than the 2016 Budget amount of $1,201.8M.

The reportable variances are as follows:

- There is an increase in the base OM&A associated with the Tritium Removal Facility at Darlington station (+$3.3M or 18.8 per cent increase) primarily due to an incremental refrigeration system outage.
1. There is an increase in the base OM&A associated with Other Support (+$21.9M or 178 per cent increase) primarily reflecting a negative $15.4M labour price variance\(^1\) in the 2016 Budget. No similar variance was budgeted in Nuclear direct OM&A in 2017 onwards as the impact was included in centrally-held pension and OPEB costs.

2018 Plan versus 2017 Plan

Planned base OM&A in 2018 is $1,226.0M, which is $15.3M (1.3 per cent) higher than the 2017 Plan amount of $1,210.6M.

The increase is primarily due to higher Pickering Station costs (+$10.0M or 2.2 per cent increase) and Darlington Station costs (+$6.9M or 2.3 per cent increase).

There are no reportable variances.

2019 Plan versus 2018 Plan

Planned base OM&A in 2019 is $1,248.4M, which is $22.4M (1.8 per cent) higher than the 2018 Plan amount of $1,226.0M.

The increase is primarily due to higher support (e.g., Engineering, IMS) costs (+$9.3M or 2.1 per cent increase), Darlington Station costs (+$8.4M or 2.7 per cent increase) and Pickering Station costs (+$4.7M or 1.0 per cent increase).

There are no reportable variances.

2020 Plan versus 2019 Plan

Planned base OM&A in 2020 is $1,264.7M, which is $16.4M (1.3 per cent) higher than the 2019 Plan amount of $1,248.4M.

\(^1\) The labour price variance is the difference between the final amount of pension and OPEB current service cost charged to the Nuclear business unit in the budget versus the initial estimate reflected in the standard labour rates.
The increase is primarily due to higher support (e.g., Engineering, IMS) costs (+$13.4M or 2.9 per cent increase).

The reportable variances are as follows:

- There is an increase in the base OM&A associated with the Darlington Site and Support Services (+$2.1M variance or 10.5 per cent increase) primarily due to increase in inventory obsolescence.
- There is an increase in the base OM&A associated with the Inspection and Maintenance Services (+$5.4M variance or 12.3 per cent increase) primarily due to increase in base labour to support increased system health, plant and tool maintenance initiatives as well as new project starts.

2021 Plan versus 2020 Plan

Planned base OM&A in 2021 is $1,276.3M, which is $11.6M (0.9 per cent) higher than the 2020 Plan amount of $1,264.7M.

The increase is primarily due to higher support costs (+$8.7M or 1.8 per cent increase).

The reportable variances are as follows:

- There is an increase in the base OM&A associated with the Pickering Work Management (+$2.1M variance or 10.1 per cent increase) primarily due to the increased outage planning due to the higher number of planned outage days in 2021 compared to 2020, mainly due to the planned Vacuum Building Outage.
- There is a decrease in the base OM&A associated with the Darlington Work Management (-$2.1M variance or 15.9 per cent decrease) due to no scheduled planned outages that qualify for an outage shift premium.
- There is a decrease in the base OM&A associated with Projects and Modifications (-$2.0M variance or 33.1 per cent decrease) primarily due to a decrease in support required for the project portfolio work activities.

4.0 PERIOD-OVER-PERIOD CHANGES – BRIDGE YEAR
2016 Budget versus 2015 Actual

Budget base OM&A in 2016 is $1,201.8M, which is $42.2M (3.6 per cent) higher than the 2015 Actual amount of $1,159.6M.

The increase is primarily due to higher Pickering Station costs (+$27.0M or 6.4 per cent increase) and Darlington Station costs (+$15.8M or 5.3 per cent increase).

The reportable variances are as follows:

- There is an increase in the base OM&A associated with Darlington Site and Support Services (+$2.6M variance or 15.9 per cent increase) primarily due to expected station discovery work and regular staff budget in 2016, which were not incurred in 2015.

- There is an increase in the base OM&A associated with the Operations component of Pickering Operations and Maintenance (+$11.3M variance or 10.1 per cent increase) primarily due to spending to improve plant operations in areas of reliability and human performance.

- There is an increase in the base OM&A associated with Pickering Work Management (+$1.9M variance or 10.2 per cent increase) primarily due to work management being under compliment in 2015.

- There is an increase in base OM&A associated with Engineering (+$16.4M or 10.1 per cent increase) primarily due to work related to Pickering Extended Operations and strategic research and development costs.

- There is an increase in the base OM&A associated with Inspection and Maintenance Services (+$13.2M or 38.8 per cent increase) primarily due to higher labour as a result of 2015 attrition and movement of resources in 2015 from base OM&A activities to support outage extensions.

- There is an increase in the base OM&A associated with Security and Emergency Services (+$12.1M variance or 14.8 per cent increase) primarily due to transfer in of security trainers from Corporate and other security officers, transfer in of fleet
maintenance from Supply Chain and higher purchased services for Fire Hazard Assessment and Emergency Management.

- There is an increase in the base OM&A associated with Fleet Operations and Maintenance (+$7.8M variance or 12.3 per cent increase) primarily due to increased radiation protection support and emergent work.
- There is an increase in the base OM&A associated with Projects and Modifications (+$1.0M variance or 16.6 per cent increase) primarily due to increased support required for the project portfolio work activities.
- There is a decrease in the base OM&A associated with Other Support (-$55.6M or 128.4 per cent decrease) primarily due to the negative labour price variance in 2016.

5.0 PERIOD-OVER-PERIOD CHANGES – HISTORICAL YEARS

2015 Actual versus 2015 OEB Approved

Actual Base OM&A in 2015 was $1,159.6M, which was $5.6M (0.5 per cent) higher than the 2015 OEB Approved Budget of $1,154.0M.

The increase was primarily due to higher Engineering and Decommissioning and Nuclear Waste Management costs, partially offset by lower Pickering operations and maintenance costs.

The reportable variances are as follows:

- Pickering Operations Site and Support Services (+$8.1M or 15.4 per cent increase) primarily reflecting an increase to the inventory obsolescence provision of $11.7M.
- Nuclear Services eliminated (-$73.7M or 100.0 per cent decrease) with groups restructured to other organizations to improve alignment with key business areas. Nuclear Regulatory Affairs and Stakeholder Relations groups from Nuclear Services to new Decommissioning and Nuclear Waste Management organization (+$45.4 variance) and Radiation Safety, Fleet Improvement, and Generation Planning groups

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2 As OEB Approved adjustments shown on Ex. F2-1-1 Table 2 were made at the aggregate Nuclear OM&A level, the figures presented here are 2015 Plan (from EB-2013-0321) rather than 2015 OEB Approved.
from Nuclear Services to Fleet Operations and Maintenance (+$37.2M variance or 142.6 per cent increase).

- Darlington Work Management (-$1.8M or 12.3 per cent decrease) primarily due to lower outage shift premiums to regular employees.
- Darlington Site and Support Services (-$2.2M or 11.8 per cent decrease) primarily due to transfer out of the Chemistry and Environmental Compliance group to other business units.

2015 Actual versus 2014 Actual

Actual Base OM&A in 2015 was $1,159.6M, which was $32.5M (2.9 per cent) higher than the 2014 Actual of $1,127.1M.

The increase was primarily due to Darlington Station costs (+$18.8M or 6.7 per cent increase), Engineering (+$14.0M or 9.5 per cent increase), Security and Emergency Services (+$6.1M or 8.0 per cent increase) and Decommissioning and Nuclear Waste Management (+$5.3M or 13.3 per cent increase), partially offset by Pickering Continued Operations costs (-$6.0M or 100.0 per cent decrease).

The reportable variances are as follows:

- Decommissioning and Nuclear Waste Management (+$5.3M or 13.3 per cent increase) primarily due to higher CNSC License fees and planning activities for the end of commercial operations at Pickering.
- Darlington Operations costs (+$9.2M or 11.6 per cent increase) primarily due to increase in the number of regular operations staff.
- Darlington Site and Support Services (-$2.5M or 13.5 per cent decrease) as there was a reduction in the inventory obsolescence provision in 2015.
- Pickering Continued Operations (-$6.0M or 100 per cent decrease) due to completion of all base outage expenditures on the program in 2014.
2014 Actual versus 2014 OEB Approved

Actual Base OM&A in 2014 was $1,127.1M, which was $24.0M (2.1 per cent) lower than the 2014 Budget of $1,151.1M.

The decrease was primarily due to lower station operations and maintenance costs, and lower Security and Emergency Services and Engineering costs.

The reportable variances are as follows:

- Pickering Operations Site and Support Services (+$12.6M or 24.1 per cent increase) primarily reflects higher inventory obsolescence (+$17.3M), partly offset by reduced labour costs due to vacancies (-$1.2M), purchased services budget allocated to maintenance activities (-$2.2M), and lower other costs primarily related to lower travel costs (-$1.3M).

- Pickering Continued Operations (-$5.2M or 46.5 per cent decrease) primarily due to base work programs for Continued Operations being reduced to fund project OM&A related Continued Operations costs.

- Projects and Modifications (+$1.6M or 29.5 per cent increase) primarily due to internal staff supporting outage work rather than using previously planned external contractors.

- Security and Emergency Services (-$9.3M or 10.9 per cent decrease) primarily reflecting lower planned labour and transfer of staff to the corporate People and Culture group in OPG.

- Nuclear Services eliminated (-$73.9M or 100.0 per cent decrease) with groups restructured to other organizations to improve alignment with key business areas. Nuclear Regulatory Affairs and Stakeholder Relations groups from Nuclear Services moved to new Decommissioning and Nuclear Waste Management organization (+$40.0M). Radiation Safety, Fleet Improvement, and Generation Planning groups from Nuclear Services moved to Fleet Operations and Maintenance (+$34.1M or 123.4 per cent increase).

3 As OEB Approved adjustments shown on Ex. F2-1-1 Table 2 were made at the aggregate Nuclear OM&A level, the figures presented here are 2014 Plan (from EB-2013-0321) rather than 2014 OEB Approved.
2014 Actual versus 2013 Actual

Actual Base OM&A in 2014 was $1,127.1M, which was $0.5M lower than the 2013 Actual of $1,127.7M.

Pickering Station costs increased by $24.9M (6.0 per cent increase) which were offset by decreased Support costs of $27.8M (6.3 per cent decrease).

The reportable variances are as follows:

- Pickering Site and Support Services (+$14.1M or 28.0 per cent increase) primarily reflects an increase in the provision for inventory obsolescence and an inventory writeoff.
- Darlington Site and Support Services (+$3.1M or 20.1 per cent increase) primarily due to an increase in the inventory obsolescence provision in 2014.
- Nuclear Services eliminated (-$75.0M variance or 100.0 per cent decrease) with groups restructured to other organizations to improve alignment with key business areas. Nuclear Regulatory Affairs and Stakeholder Relations groups from Nuclear Services moved to new Decommissioning and Nuclear Waste Management organization (+$40.0M variance). Radiation Safety, Fleet Improvement, and Generation Planning groups from Nuclear Services moved to Fleet Operations and Maintenance (+$31.2M variance or 102.1 per cent increase).
- Other Support (-$16.9M variance or 27.8 per cent decrease) due to 2013 inventory write-off.
- Pickering Continued Operations (-$3.9M variance or 39.4 per cent decrease) due to reduced work.
- Darlington Work Management (-$2.5M variance or 16.3 per cent decrease) as there was one outage in 2014, compared to two outages in 2013, which resulted in less outage shift premiums to regular employees.
- Tritium Removal Facilities (-$1.8M variance or 10.5 per cent decrease) primarily due to no planned refrigeration system outage in 2014.
**2013 Actual versus 2013 Budget**

Actual Base OM&A in 2013 was $1,127.7M, which was $12.0M (1.1 per cent) lower than the 2013 Budget of $1,139.6M. The decrease was primarily due to lower station Support Services, Engineering, and Security and Emergency Services costs. The reportable variances are as follows:

- Darlington Site and Support Services (-$2.4M or 13.2 per cent decrease) primarily reflecting lower than expected discovery work.
- Pickering Continued Operations (-$2.7M or 21.4 per cent decrease) primarily reflecting base work programs for Continued Operations being reduced and offset by project related work for Pickering Continued Operations.
- Other Support (+$18.4M or 43.6 per cent increase) primarily reflecting an unbudgeted inventory write-off (+$17.6M).
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### Notes:
1. Bold italic font indicates variance of 10% or greater.
2. As OEB Approved adjustments shown on Ex. F2-1-1 Table 2 were made at the aggregate Nuclear OM&A level, the figures presented here are 2014 Plan and 2015 Plan (from EB-2013-0321) rather than 2014 OEB Approved and 2015 OEB Approved, respectively.
3. Nuclear Support includes expenditures for Pickering Continued Operations and Pickering Extended Operations. See Ex. F2-1 Table 1, Notes 1 and 2.
4. Beginning in 2014, Nuclear Waste & Decommissioning is reported separately rather than being included under "Other Support".