

DARLINGTON REFURBISHMENT

OM&A

1.0 PURPOSE

This section identifies the OM&A costs associated with the Darlington Refurbishment Program (“DRP”).

2.0 OVERVIEW

The DRP is described in Ex. D2-2-1 to Ex. D2-2-10. The DRP is primarily a capital project but includes OM&A expenditures for removal costs and Low and Intermediate Level Waste (“L&ILW”) variable expenses related to disposal costs, also referred to as tipping fees, as these costs are determined and charged to the DRP based on the volume of waste. OPG is seeking OEB approval for OM&A expenditures of \$41.5M in 2017, \$13.8M in 2018, \$3.5M in 2019, \$48.4M in 2020, and \$19.7M in 2021. A summary of DRP OM&A expenditures is provided in Ex. F2-7-1, Table 1 for 2014 - 2021.

3.0 2014 AND 2015 EXPENDITURES

In EB-2013-0321, the OEB approved DRP OM&A expenditures of \$6.6M for 2014 and \$18.2M for 2015. Actual costs were \$6.3M for 2014 and \$1.6M for 2015.

3.1 2014 OM&A Variance

The OM&A cost variance for 2014 of \$0.3M (Ex. F2-7-1, Table 2) is primarily due to the deferral to 2015 of some removal activities for the Electrical Power Distribution System project.

3.2 2015 OM&A Variance

The OM&A cost variance for 2015 of \$16.7M (Ex. F2-7-1, Table 2) is primarily due to cost classification changes for the Operations trainee program from DRP to Nuclear Operations, transfer of facilities and infrastructure demolition projects and removal activities to Nuclear Operations portfolio, and un-utilized contingency for potential Definition Phase costs that are not eligible for capitalization.

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4.0 2016 OM&A EXPENDITURES

OPG has budgeted DRP OM&A expenditures of \$1.3M for 2016, made up of \$1M for L&ILW variable expenses and \$0.3M removal costs related to the Water and Sewer project described in section 2.4.5.2 of Ex. D2-2-10.

5.0 2017 TO 2021 OM&A EXPENDITURES

OPG has budgeted DRP OM&A expenditures of \$41.5M for 2017, \$13.8M for 2018, \$3.5M for 2019, \$48.4M for 2020, and \$19.7M for 2021. These are mainly removal costs associated with the replacement of existing assets totalling \$112.4M over the 2017-2021 test period, and L&ILW variable expenses totalling \$14.0M over the 2017-2021 test period.

5.1 2017 OM&A Expenditures

The \$41.5M 2017 OM&A expenditures are mainly removal costs, \$24.7M related to Retube and Feeder Replacements for Unit 2 and \$14.3M for other unit refurbishment projects, as well as \$2.5M L&ILW variable expenses.

5.2 2018 OM&A Expenditures

The \$13.8M 2018 OM&A expenditures are mainly removal costs, \$2.8M related to Retube and Feeder Replacements for Unit 2 and \$8.7M related to Fuel Handling trolley, as well as \$2.1M L&ILW variable expenses.

5.3 2019 OM&A Expenditures

The \$3.5M 2019 OM&A expenditures include \$2.8M L&ILW variable expenses, and \$0.6M removal costs.

5.4 2020 OM&A Expenditures

The \$48.4M 2020 OM&A expenditures are mainly removal costs, \$30.3M related to Retube and Feeder Replacements for Unit 3 and \$15.1M for other unit refurbishment projects, as well as \$2.9M L&ILW variable expenses.

1 **5.5 2021 OM&A Expenditures**

2 The \$19.7M 2021 OM&A expenditures are mainly removal costs, \$11.8M related to Retube
3 and Feeder Replacements for Units 1 and 3, \$4.0M for other unit refurbishment projects, as
4 well as \$3.8M L&ILW variable expenses.

Numbers may not add due to rounding.

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Exhibit F2
Tab 7
Schedule 1
Table 1

Table 1
OM&A - Darlington Refurbishment (\$M)

Line No.	Description	2013 Actual	2014 Actual	2015 Actual	2016 Budget	2017 Plan	2018 Plan	2019 Plan	2020 Plan	2021 Plan
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
1	Darlington Refurbishment - Unit Refurbishment ¹	4.6	4.3	1.4	1.0	41.5	13.8	3.5	48.4	19.7
2	Facilities and Infrastructure Projects ²	1.7	2.0	0.1	0.3	0.0	0.0	0.0	0.0	0.0
3	Safety Improvement Opportunities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	Total Darlington Refurbishment OM&A	6.3	6.3	1.6	1.3	41.5	13.8	3.5	48.4	19.7

Notes:

- 1 The Unit Refurbishment 2016-2021 amounts include removal costs of existing structures or facilities, and L&ILW variable expense.
- 2 The F&IP 2013-2021 numbers include removal costs of existing structures or facilities prior to construction or modification.

Numbers may not add due to rounding.

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 Table 2

Table 2
 Comparison of OM&A - Darlington Refurbishment (\$M)

Line No.	Business Unit	2013 Budget	(c)-(a) Change	2013 Actual	(g)-(c) Change	2014 OEB Approved ²	(g)-(e) Change	2014 Actual	(k)-(g) Change	2015 OEB Approved ²	(k)-(i) Change	2015 Actual
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
1	Darlington Refurbishment - Unit Refurbishment ¹	10.0	(5.4)	4.6	(0.3)	4.3	(0.0)	4.3	(2.9)	9.0	(7.6)	1.4
2	Facilities and Infrastructure Projects ²	8.2	(6.5)	1.7	0.2	2.3	(0.3)	2.0	(1.8)	9.3	(9.1)	0.1
3	Safety Improvement Opportunities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4	Total Darlington Refurbishment OM&A	18.2	(11.8)	6.3	(0.1)	6.6	(0.3)	6.3	(4.7)	18.2	(16.7)	1.6

Line No.	Business Unit	2015 Actual	(c)-(a) Change	2016 Budget	(e)-(c) Change	2017 Plan	(g)-(e) Change	2018 Plan	(i)-(g) Change	2019 Plan	(k)-(i) Change	2020 Plan
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
5	Darlington Refurbishment - Unit Refurbishment ¹	1.4	(0.4)	1.0	40.6	41.5	(27.8)	13.8	(10.2)	3.5	44.8	48.4
6	Facilities and Infrastructure Projects ²	0.1	0.2	0.3	(0.3)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	Safety Improvement Opportunities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	Total Darlington Refurbishment OM&A	1.6	(0.3)	1.3	40.3	41.5	(27.8)	13.8	(10.2)	3.5	44.8	48.4

Line No.	Business Unit	2020 Plan	(c)-(a) Change	2021 Plan
		(a)	(b)	(c)
9	Darlington Refurbishment - Unit Refurbishment ¹	48.4	(28.6)	19.7
10	Facilities and Infrastructure Projects ²	0.0	0.0	0.0
11	Safety Improvement Opportunities	0.0	0.0	0.0
12	Total Darlington Refurbishment OM&A	48.4	(28.6)	19.7

Notes:

- 1 The Unit Refurbishment 2016-2021 amounts include removal costs of existing structures or facilities prior to construction modification, and L&ILW variable expense.
- 2 The Facilities and Infrastructure Projects 2013-2021 amounts include removal costs of existing structures or facilities prior to construction or modification.