Numbers may not add due to rounding.

Updated: 2021-07-09
EB-2020-0290
Exhibit L
F4-01-Staff-271
Attachment 1
Table 1

Table 1

Impact of Year End Actual 2020 Adustment - Assignment of ARO Adjustment and Allocation of ARC to Nuclear Stations ($M)

Line No.	Description	Pickering Units 1 & 4	Pickering Units 5 - 8	Darlington	Prescribed Facilities Total	Bruce A	Bruce B	Bruce Facilities Total	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

Numbers may not add due to rounding.

Table 2

Projected Revenue Requirement Impact Resulting from Optimization of Pickering Station End-of-Life Dates - Prescribed Facilities[1] ($M)

Years Ending December 31, 2022 to 2026

Line No.	Description	Note	2022	2023	2024	2025	2026
			(a)	(b)	(c)	(d)	(e)
	AMOUNTS SUBJECT TO THE IMPACT RESULTING FROM OPTIMIZATION OF PICKERING STATION END-OF-LIFE DATES DEFERRAL ACCOUNT						
	Depreciation Expense:						
1	**Asset Retirement Costs** (Note 2, col. (f), lines 2e, 2h, 2k, 2n)		(2.0)	29.7	29.7	(0.2)	(0.2)
2	**Non-Asset Retirement Costs** (Note 3, line 3c)		(37.4)	38.1	34.6	0.0	0.0
3	**Total Depreciation Expense Impact**		(39.3)	67.7	64.3	(0.2)	(0.2)
	Cost of Capital:						
4	**ARC Rate Base** (Note 4, line 4h)		2.3	2.4	0.6	(0.2)	(0.2)
5	**Non-ARC Rate Base** (Note 5, line 5f)		3.2	3.2	1.0	0.0	0.0
6	**Total Return on Rate Base Impact**		5.5	5.6	1.7	(0.2)	(0.2)
	Other Expenses:	6					
7	**Used Fuel Storage and Disposal Variable Expenses**		16.7	19.4	19.9	14.5	14.6
8	**Low & Intermediate Level Waste Management Variable Expenses**	7	0.8	0.8	0.8	0.6	0.4
9	**Total Other Expenses Impact** (line 7 + line 8)		17.5	20.2	20.7	15.1	15.1
	Income Taxes:						
10	**Depreciation Expense on Asset Retirement Costs** (line 1 x (25%/75%))		(0.7)	9.9	9.9	(0.1)	(0.1)
11	**Depreciation Expense on Non-Asset Retirement Costs** (line 2 x (25%/75%))		(12.5)	12.7	11.5	0.0	0.0
12	**Cost of Capital for ARC Rate Base** (Note 4, line 4k x (25%/75%))		0.9	0.6	0.1	(0.1)	(0.1)
13	**Cost of Capital for Non-ARC Rate Base** (Note 5, line 5g x (25%/75%)		0.8	0.7	0.2	0.0	0.0
14	**Used Fuel Storage and Disposal Variable Expenses** (line 7 x (25%/75%))		5.6	6.5	6.6	4.8	4.9
15	**Low & Intermediate Level Waste Management Variable Expenses** (line 8 x (25%/75%))	7	0.3	0.3	0.3	0.2	0.1
16	**Total Income Tax Impact**		(5.6)	30.6	28.7	4.9	4.9
17	**Total Nuclear Liabilities Cost Impact** (line 3 + line 6 + line 9 + line 16)		23.9	69.4	67.9	19.6	19.6
18	**Total Non-ARC Depreciation Impact** (line 2 + line 5 + line 11 + line 13)		(45.8)	54.7	47.5	0.0	0.0
19	**Total Impact - Amounts Subject to the Impact Resulting from Optimization of Pickering Station End-of-Life Dates Deferral Account** (line 17 + line 18)		(21.9)	124.1	115.4	19.6	19.6
	AMOUNTS SUBJECT TO THE CAPACITY REFURBISHMENT VARIANCE ACCOUNT						
20	**Low & Intermediate Level Waste Management Variable Expenses**	7	1.0	1.3	1.1	0.4	0.1
21	**Income Tax Impact** (line 20 x (25%/75%))		0.3	0.4	0.4	0.1	0.0
22	**Total Impact - Amounts Subject to the Capacity Refurbishment Variance Account** (line 20 + line 21)		1.4	1.7	1.5	0.6	0.1
23	**Grand Total Impact** (line 19 + line 22)		(20.5)	125.8	116.9	20.2	19.7

Numbers may not add due to rounding.

Table 2a

Notes to Table 2

Projected Revenue Requirement Impact Resulting from Changes in Station End-of-Life Dates - Prescribed Facilities ($M)

1 Calculations for 2021 to 2026 in this table follow the methodology in EB-2018-0002 Decision and Order, Schedule A.

2 The ARC depreciation expense component of the projected addition to the deferral account is calculated as follows:

Table to Note 2 - Depreciation Expense ($M)

Line No.		Pickering Units 1 & 4	Pickering Units 5-8	Darlington	(a)+(b)+(c) Total	ARC Depreciation per EB-2020-0290 *	Impact (d) less (e)
		(a)	(b)	(c)	(d)	(e)	(f)
2a	Asset Retirement Cost as at December 31, 2020 Before Adjustment#	63.3	187.8	113.9	365.2		
2b	Asset Retirement Cost Adjustment as at December 31, 2020	50.4	5.6	(4.8)	51.1		
2c	Unamortized 2017 Asset Retirement Cost as at December 31, 2020 (line 2a - line 2b)	113.6	193.4	109.1	416.2		
2d	Remaining Useful Life as at December 31, 2020 (months)+	48.0	48.0	384.0			
2e	Annual Depreciation (line 2c / line 2d x 12)	28.4	48.3	3.4	80.2	82.2	(2.0)
2f	Unamortized 2021 Asset Retirement Cost as at December 31, 2021 (line 2c - line 2e)	85.2	145.0	105.7	336.0		
2g	Remaining Useful Life as at December 31, 2021 (months)+	36.0	36.0	372.0			
2h	2022 Annual Depreciation (line 2f / line 2g x 12)	28.4	48.3	3.4	80.2	82.2	(2.0)
2i	Unamortized 2022 Asset Retirement Cost as at December 31, 2022 (line 2f - line 2h)	56.8	96.7	102.3	255.8		
2j	Remaining Useful Life as at December 31, 2022 (months)+	24.0	24.0	360.0			
2k	2023 Annual Depreciation (line 2i / line 2j x 12)	28.4	48.3	3.4	80.2	50.5	29.7
2l	Unamortized 2023 Asset Retirement Cost as at December 31, 2023 (line 2i - line 2k)	28.4	48.3	98.9	175.7		
2m	Remaining Useful Life as at December 31, 2023 (months)+	12.0	12.0	348.0			
2n	2024 Annual Depreciation (line 2l / line 2m x 12)	28.4	48.3	3.4	80.2	50.5	29.7
2o	Unamortized 2024 Asset Retirement Cost as at December 31, 2024 (line 2i - line 2k)	0.0	0.0	95.5	95.5		
2p	Remaining Useful Life as at December 31, 2024 (months)+	0.0	0.0	336.0			
2q	2025 Annual Depreciation (line 2o / line 2p x 12)	0.0	0.0	3.4	3.4	3.6	(0.2)
2r	Unamortized 2025 Asset Retirement Cost as at December 31, 2025 (line 2i - line 2k)	0.0	0.0	92.1	92.1		
2s	Remaining Useful Life as at December 31, 2025 (months)+	0.0	0.0	324.0			
2t	2026Annual Depreciation (line 2r / line 2s x 12)	0.0	0.0	3.4	3.4	3.6	(0.2)
2u	Unamortized 2026 Asset Retirement Cost as at December 31, 2026 (line 2l - line 2n)	0.0	0.0	88.7	88.7		

Col. (d) per Ex. L-A1-02-Staff-002, Table 7, col. (a), line 24; and EB-2018-0002 Ex. L-1-Staff-1, Att. 1, Table 1, line 1 (differences due to rounding)

+ Represents the remaining estimated average service life, for accounting purposes, of the nuclear stations as at December 31, 2020 based on accounting end-of-life dates per Ex. L-F4-01-Staff-269, Attachment 1, p. 4. A common end date of December 31, 2024 is used to estimate ARC depreciation for Pickering Units 1 & 4 due to the integrated nature of Unit operations.

* Per EB-2016-0152 PAO, App. A, Table 10, col. (b) line 49 for 2021 and EB-2020-0290, Ex. C2-1-1, Table 2, line 23, cols. (k) to (o) for 2022 to 2026.

3 The non-ARC depreciation and amortization expense component of the projected addition to the deferral account is calculated as follows ($M):

		2021	2022	2023	2024	2025	2026
		(a)	(b)	(c)	(d)	(e)	(f)
3a	Unadjusted non-ARC depreciation and amortization expense - December 31, 2022 / December 31, 2024 End-of-Life (EB-2020-0290, Ex. B3-4-1, Table 2)*	463.0	432.4	421.0	528.2	0.4	0.0
3b	Total Non-ARC depreciation and amortization expense - December 31, 2024 End-of-Life#	427.7	395.0	459.1	562.9	0.4	0.0
3c	Impact of Pickering End-of-Life Extension (line 3b less line 3a)	(35.4)	(37.4)	38.1	34.6	0.0	0.0

Calculated by applying the revised Pickering end-of-life dates (Note 2, note +) to the current forecast non-ARC Pickering-related gross plant including in-service additions (EB-2020-0290, Ex. B3-3-1, Tables 1 and 2) and holding all other variables constant, effective January 1, 2021.

Numbers may not add due to rounding.

Table 2b

Notes to Table 2 - Continued

Projected Revenue Requirement Impact Resulting from Changes in Station End-of-Life Dates - Prescribed Facilities ($M)

4 Cost of capital for ARC Rate Base component of the projected addition to the deferral account is calculated as follows ($M):

		2022	2023	2024	2025	2026
		(a)	(b)	(c)	(d)	(e)
4a	Average ARC: Note 2, col. (d); (opening ARC + closing ARC for corresponding year)/2	295.8	215.6	135.7	94.2	90.8
4b	Average Unfunded Nuclear Liability Balance	151.1	(107.0)	(290.8)	(452.1)	(547.2)
4c	Weighted Average Accretion Rate	4.86%	4.86%	4.86%	4.86%	4.86%
4d	Return on Rate Base at Weighted Average Accretion Rate ((lesser of line 4a or 4b) x line 4c) +	7.3	0.0	0.0	0.0	0.0
4e	Return on Rate Base at Weighted Average Cost of Capital ((line 4a - line 4b)*WACC) +	8.7	12.8	8.1	5.7	5.5
4f	EB-2020-0290 Return at Weighted Average Accretion Rate (EB-2020-0290, Ex. C2-1-1, Table 1, line 4)	3.6	0.0	0.0	0.0	0.0
4g	EB-2020-0290 Return at Weighted Average Cost of Capital (EB-2020-0290, Ex. C2-1-1, Table 1, line 5)	10.1	10.4	7.5	5.9	5.7
4h	Impact of Pickering end-of-life extension ((line 4d + line 4e) - (line 4f + line 4g))	2.3	2.4	0.6	-0.2	-0.2
4i	Return on Equity component of cost of capital ((line 4a - line 4b) x 50% x 8.34%)	6.0	9.0	5.7	3.9	3.8
4j	Return on Equity component of cost of capital EB-2020-0290 #	7.0	7.3	5.2	4.1	3.9
4k	Impact of Pickering end-of-life extension on Cost of Capital for Income Tax Calculation ((line 4d - line 4f) + (line 4i - line 4j))	2.8	1.7	0.4	(0.2)	(0.2)

\+ Average UNL is lower than average ARC in each year of the 2022-2026 period. For 2023-2026, when UNL is a negative value, no return at accretion is recorded, and the return at rate base is limited to: average ARC at line 4a multiplied by weighted average cost of capital.

\# Determined as follows: For 2022, Ex. C2-1-1, Table 2, [line 28 less line 30] multiplied by 50% equity thickness multiplied by 8.34% ROE; for 2023-2026, Ex. C2-1-1, Table 2, line 28 multiplied by 50% equity thickness multiplied by 8.34% ROE.

5 Cost of Capital for non-ARC Rate Base component of the projected addition to the deferral account is calculated as follows ($M):

		2022	2023	2024	2025	2026
5a	Opening non-ARC net plant balance impact #	35.4	72.7	34.6	0.0	0.0
5b	Non-ARC depreciation and amortization expense impact (Note 3, line 3f)	37.4	(38.1)	(34.6)	0.0	0.0
5c	Ending non-ARC net plance balance impact (line 5a + line 5b)	72.7	34.6	(0.0)	0.0	0.0
5d	Non-ARC Rate Base Impact (line 5a + line 5c)/2	54.1	53.7	17.3	0.0	0.0
5e	Weighted Average Cost of Capital (EB-2020-0290, Ex. C1-1-1, Tables 1-5, col. (c), line 6)	5.98%	5.93%	5.99%	6.01%	6.01%
5f	Total Cost of Capital (line 5d x line 5e)	3.2	3.2	1.0	0.0	0.0
5g	Return on Equity component of cost of capital (line 5d x 50% x 8.34%)	2.3	2.2	0.7	0.0	0.0

\# 2022 per Note 3, line 3c, col. (a). 2023-2026 opening balance per previous year line 5c

6 The variable expense component of the projected addition to the deferral account is determined by multiplying the differences between (i) and (ii) by the corresponding forecast number of used fuel bundles and low and intermediate level waste ("L&ILW") volumes reflected in the EB-2020-0290 nuclear revenue requirements, where:
(i) is the 2021-2026 unit cost rates for each of the Used Fuel Storage and Disposal Programs ($/fuel bundle) and the L&ILW Storage and Disposal Programs ($/m3 of L&ILW) reflecting the 2.01% discount rate used to determine the year-end 2020 ARO adjustment reflecting the Pickering end-of-life extension, and
(ii) the equivalent 2021-2026 unit cost rates reflected in the corresponding variable expenses included in EB-2020-0290 nuclear revenue requirements.

7 Line 8 excludes $1.0M, $1.3M, $1.1M, $0.4M and $0.1M of Low & Intermediate Level Waste Management Variable Expenses portion of the Darlington Refurbishment to avoid duplications for 2022 to 2026, respectively, which is presented separately at Line 20.

Numbers may not add due to rounding.

Table 3
Projected Revenue Requirement Impact Resulting from Changes in Station End-of-Life Dates - Bruce Facilities ($M)
Years Ending December 31, 2022 to 2026

Line No.	Description	Note	2022 Plan	2023 Plan	2024 Plan	2025 Plan	2026 Plan
			(a)	(b)	(c)	(d)	(e)
	BRUCE FACILITIES						
1	**Depreciation of Asset Retirement Costs**	1	0.2	0.2	0.2	0.2	0.2
2	**Used Fuel Storage and Disposal Variable Expenses**	2	22.2	25.8	22.7	24.9	20.1
3	**Low & Intermediate Level Waste Management Variable Expenses**	2	0.6	0.7	0.7	0.6	0.7
4	**Accretion Expense**		0.1	(0.1)	(0.3)	(0.6)	(0.8)
5	**Less: Segregated Fund Earnings (Losses)**		0.0	0.0	0.0	0.0	0.0
6	**Impact on Bruce Facilities' Income Taxes**	1	(5.8)	(6.6)	(5.8)	(6.3)	(5.0)
7	**Pre-Tax Revenue Requirement Impact (Impact on Bruce Lease Net Revenues)**		17.3	19.9	17.5	18.9	15.1
8	**Income Tax Impact on Revenue Requirement** (line 7 x tax rate / (1-tax rate))	2	5.8	6.6	5.8	6.3	5.0
9	**Total Revenue Requirement Impact - Bruce Facilities** (line 7 + line 8)		23.1	26.6	23.3	25.2	20.2

Notes:

See Table 3a for notes.

Numbers may not add due to rounding.

Table 3a

Notes to Table 3

Projected Revenue Requirement Impact Resulting from Changes in Station End-of-Life Dates - Bruce Facilities ($M)

1 The ARC depreciation expense component of the projected addition to the deferral account is calculated as follows:

Table to Note 1 - Depreciation Expense ($M)

Line No.		Bruce A	Bruce B	Total (a) + (b)	ARC Depreciation per EB-2020-0290 *	Impact (c) less (d)
		(a)	(b)	(c)	(d)	(e)
2a	Asset Retirement Cost as at December 31, 2020 Before Adjustment#	327.0	2,419.8	2,746.8		
2b	Asset Retirement Cost Adjustment as at December 31, 2020	(15.7)	28.7	13.0		
2c	Unamortized 2017 Asset Retirement Cost as at December 31, 2020 (line 2a - line 2b)	311.3	2,448.4	2,759.8		
2d	Remaining Useful Life as at December 31, 2020 (months)+	384.0	492.0			
2e	Annual Depreciation (line 2c / line 2d x 12)	9.7	59.7	69.4	69.2	0.2
2f	Unamortized 2021 Asset Retirement Cost as at December 31, 2021 (line 2c - line 2e)	301.6	2,388.7	2,690.3		
2g	Remaining Useful Life as at December 31, 2021 (months)+	372.0	480.0			
2h	2022 Annual Depreciation (line 2f / line 2g x 12)	9.7	59.7	69.4	69.2	0.2
2i	Unamortized 2022 Asset Retirement Cost as at December 31, 2022 (line 2f - line 2h)	291.9	2,329.0	2,620.9		
2j	Remaining Useful Life as at December 31, 2022 (months)+	360.0	468.0			
2k	2023 Annual Depreciation (line 2i / line 2j x 12)	9.7	59.7	69.4	69.2	0.2
2l	Unamortized 2023 Asset Retirement Cost as at December 31, 2023 (line 2i - line 2k)	282.1	2,269.3	2,551.4		
2m	Remaining Useful Life as at December 31, 2023 (months)+	348.0	456.0			
2n	2024 Annual Depreciation (line 2l / line 2m x 12)	9.7	59.7	69.4	69.2	0.2
2o	Unamortized 2024 Asset Retirement Cost as at December 31, 2024 (line 2i - line 2k)	272.4	2,209.6	2,482.0		
2p	Remaining Useful Life as at December 31, 2024 (months)+	336.0	444.0			
2q	2025 Annual Depreciation (line 2o / line 2p x 12)	9.7	59.7	69.4	69.2	0.2
2r	Unamortized 2025 Asset Retirement Cost as at December 31, 2025 (line 2i - line 2k)	262.7	2,149.8	2,412.5		
2s	Remaining Useful Life as at December 31, 2025 (months)+	324.0	432.0			
2t	2026Annual Depreciation (line 2r / line 2s x 12)	9.7	59.7	69.4	69.2	0.2
2u	Unamortized 2026 Asset Retirement Cost as at December 31, 2026 (line 2l - line 2n)	253.0	2,090.1	2,343.1		

Col. (d) per Ex. L-A1-02-Staff-002, Table 7, col. (b), line 24 (differences due to rounding)

+ Represents the remaining estimated average service life, for accounting purposes, of the nuclear stations as at December 31, 2020 based on accounting end-of-life dates per Ex. L-F4-01-Staff-269, Attachment 1, p. 4.

* Per EB-2020-0290, Ex. C2-1-1, Table 3, line 20, cols. (f) to (k) for 2021 to 2026.

2 The variable expense component of the projected addition to the deferral account is determined by multiplying the differences between (i) and (ii) by the corresponding forecast number of used fuel bundles and low and intermediate level waste ("L&ILW") volumes reflected in the EB-2020-0290 nuclear revenue requirements, where:
(i) is the 2022-2026 unit cost rates for each of the Used Fuel Storage and Disposal Programs ($/fuel bundle) and the L&ILW Storage and Disposal Programs ($/m3 of L&ILW) reflecting the 2.01% discount rate used to determine the year-end 2020 ARO adjustment reflecting the Pickering end-of-life extension, and
(ii) the equivalent 2022-2026 unit cost rates reflected in the corresponding variable expenses included in EB-2020-0290 nuclear revenue requirements.

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 1 ($M)

Line No.	Item	2022 Plan	2023 Plan	2024 Plan	2025 Plan	2026 Plan
		(a)	(b)	(c)	(d)	(e)
1a	Increase in Temporary Differences (Ex. C2-1-1 Table 1, lines 9 through 13)	23.1	26.6	23.3	25.2	20.2
2a	Income Tax Rate (Ex. G2-2-1 Table 7, line 19 and Ex. G2-2-1 Table 8, line 19)	25.00%	25.00%	25.00%	25.00%	25.00%
3a	Impact on Bruce Facilities' Income Taxes (line 1a x line 2a)	(5.8)	(6.6)	(5.8)	(6.3)	(5.0)

2 Income tax rates are from Ex. F4-2-1 Table 3, line 32 (2016-2021), and Ex. F4-2-1 Table 3a, line 31 (2022-2026).