Numbers may not add due to rounding.

Table 1a
Capital Project Listing - Nuclear Operations Facility Projects
Projects ≥ $20M Total Project Cost[1]

Line No.	Facility	Project Name	Project Number	Category	Start Date	Final In-Service Date[13]	Total Project Cost[2] ($M)	Total Project Cost - EB-2016-0152 ($M)	1st Execution Business Case[5] ($M)	1st Execution Business Case-EB-2016-0152[5] ($M)	Total In-Service ($M)	In-Service LTD[14] ($M)	In-Service IR Term ($M)	In-Service 2020 ($M)	In-Service 2021 ($M)	In-Service 2022 ($M)	In-Service 2023 ($M)	In-Service 2024 ($M)	In-Service 2025 ($M)	In-Service 2026 ($M)
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	(t)
		ONGOING PROJECTS FROM EB-2016-0152																		
1	DN	DN Class II Uninterruptible Power Supply Replacement	31412	Sustaining	Jan-11	Mar-25	63.6	55.1	38.4	38.4	62.0	29.2	25.2	0.0	7.5	13.9	5.9	0.0	5.4	0.1
2	DN	DN Fuel Handling Inverter Replacement	31426	Sustaining	Nov-11	Apr-21	26.2	14.4	13.9	n/a	26.1	23.7	0.0	1.0	2.5	0.0	0.0	0.0	0.0	0.0
3	DN	DN Station Fluorescent Lighting Fixtures Retrofit	31516	Sustaining	Dec-12	Jan-23	20.7	11.4[6]	16.9	n/a	19.8	9.6	3.9	3.1	3.2	1.4	2.5	0.0	0.0	0.0
4	DN	DN Restore Emergency Service Water and Firewater Margins	31518	Regulatory	Dec-12	Aug-19	28.5	47.1	28.5	n/a	10.5	9.7	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0
5	DN	DN Station Roofs Replacement	31524	Sustaining	Nov-12	Nov-27	116.9	36.3[7]	n/a	n/a	116.8	21.5	66.2	11.9	12.7	12.8	12.0	14.2	15.2	12.0
6	DN	DN Powerhouse Water Air Condition Units Replacement	31532	Sustaining	Oct-12	Jan-23	38.2	26.6[8]	26.6	26.6	30.7	13.9	3.1	3.7	10.2	2.9	0.2	0.0	0.0	0.0
7	DN	DN Water Treatment Plant Interconnections	31535	Sustaining	Sep-11	Sep-24	53.2	57.8	n/a	n/a	53.2	0.0	53.2	0.0	0.0	0.0	0.0	53.2	0.0	0.0
8	DN	DN Transformer Multi-Gas Analyzer Installation	31542	Sustaining	Oct-12	Dec-20	23.8	22.7	15.2	15.2	22.5	22.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	DN	DN Radiation Detection Equipment Obsolescence	31544	Sustaining	Jan-14	Sep-23	45.0	46.9	n/a	n/a	41.3	0.0	22.3	0.0	19.0	15.0	7.0	0.3	0.0	0.0
10	DN	DN Shutdown Cooling Heat Exchanger Replacement	31710	Sustaining	Nov-12	Dec-21	111.4	112.8[9]	56.1	56.1	74.1	72.1	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0
11	DN	DN Neutron Over-Power Ion Chamber & In-Core Flux Detector Amplifier Replacement (Reactor Regulating System, Shutdown System 1 & Shutdown System 2)	31716	Sustaining	Jul-13	Apr-27	23.8	17.7	23.8	n/a	17.9	1.2	9.6	1.6	2.5	1.6	1.4	2.0	2.2	2.4
12	DN	DN Replacement of Emergency Power Supply Uninterruptible Power Supply	33258	Sustaining	Feb-10	Feb-22	24.6	16.6	15.2	15.2	24.8	13.9	2.1	1.7	7.1	2.1	0.0	0.0	0.0	0.0
13	DN	DN Air Conditioning Unit Replacement for Secondary Control Area	33621	Sustaining	Feb-09	Aug-25	36.0	28.3	12.3	12.3	34.1	24.4	9.6	0.0	0.0	5.1	2.2	0.0	2.2	0.2
14	DN	DN Chiller Replacement to Reduce Chloroflurocarbon Emissions	33631	Regulatory	Jan-04	Dec-17	30.0	30.0	14.9	14.9	21.6	21.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15	DN	DN Major Pump-sets Vibration Monitoring System Upgrades	33819	Sustaining	Mar-06	Nov-26	55.4	23.8	12.8	n/a	48.2	10.4	18.0	11.2	9.0	5.0	5.0	4.0	2.0	2.0
16	DN	DN Standby Generator Controls Replacement	33973	Sustaining	Dec-06	Mar-21	46.3	39.6	21.8	21.8	46.1	44.1	0.4	0.0	1.6	0.4	0.0	0.0	0.0	0.0
17	DN	DN Digital Control Computer Replacement / Refurbishment / Upgrades	33977	Sustaining	Sep-03	Dec-21	26.5	24.9	22.1	22.1	26.5	23.1	0.3	1.1	2.1	0.3	0.0	0.0	0.0	0.0
18	DN	DN Auxiliary Heating System - Phases 1 & 2 Alternative Heating	34000	Regulatory	Mar-06	Jun-18	107.1	107.2[10]	45.6	45.6	102.1	102.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	DN	DN Zebra Mussel Mitigation Improvements	38948	Sustaining	Nov-12	Dec-21	36.6	29.3[12]	21.5	21.5	36.5	34.8	0.0	1.4	0.4	0.0	0.0	0.0	0.0	0.0
20	DN	DN RS Primary Heat Transport Pump Motor Replacement[4]	73566	Sustaining	Jul-15	May-21	84.0	129.5	26.7	26.7	71.4	68.0	0.2	0.0	3.1	0.2	0.0	0.0	0.0	0.0
21	DN	DN OH180 Aging Management Hardware Installation	80022	Sustaining	Dec-14	Jun-28	60.9	90[11]	60.9	n/a	38.0	11.6	16.0	3.1	5.9	4.1	3.9	2.9	2.1	2.9
22	DN	DN Steam Generator Level Control Valve Replacement	80023	Sustaining	Jan-15	Jun-26	38.6	16.3	n/a	n/a	38.5	0.0	38.5	0.0	0.0	0.0	9.6	9.6	9.6	9.6
23	DN	DN R22 Refrigerant Air Conditioning Unit Replacement	80036	Regulatory	Dec-15	Jan-26	36.1	14.9	n/a	n/a	37.8	2.0	27.1	2.9	5.9	2.3	6.7	7.1	6.5	4.5
24	DN	DN Standby Generators Protective Relay Replacement	80063	Sustaining	Dec-15	Feb-23	20.0	9.9	n/a	n/a	15.8	0.0	15.8	0.0	0.0	11.7	3.0	0.7	0.3	0.0
25	DN	DN Digital Control, Common Process and Sequence of Events Monitoring Computer Aging Management	80078	Regulatory	Nov-15	Feb-28	77.5	47.3	n/a	n/a	56.5	0.9	42.2	0.0	0.0	2.0	4.7	7.1	18.5	9.9

Notes:

1 Projects with expenditures during IR term OR In-Service Amounts in Bridge or IR term, AND Completed/Deferred Projects at the time of preparing the Amended 2020-2026 Business Plan (from EB-2016-0152 or subsequent).
2 Total Project Cost reflects BCS amounts at the time of preparing the Amended 2020-2026 Business Plan, with the exception of Completed/Deferred/Cancelled Projects (for which actual costs are shown). BCS amounts reflect point estimates or, if range estimate or no estimate is provided in lieu of a point estimate, the current estimate of total project cost
3 Projects 31508, 49158 and 49299 are combined in a single Business Case Summary.
4 Projects 73566 ($84.0M), 36001 ($27.6M) and 80144 ($53.3M) are combined in a single Business Case Summary ($164.9M). In EB-2016-0152 project 73566 and project 80144 were included in Ex D2-1-3 Table 1 with a combined project cost of $129.5M, while #36001 project cost was $30.8M. First execution BCS amounts are derived from the combined amount
5 The designation of "n/a" means the project has not advanced to a First Execution BCS
6 EB-2016-0152 L-04.4-15 SEC 048
7 Total project cost set out in EB-2016-0152, Ex. D2-1-3, Table 1 incorrectly identified total project cost for Project #31524 as $38.3M.
8 EB-2016-0152 L 04.2-2 Staff 028
9 EB-2016-0152 J15.5 Attachment 1
10 EB-2016-0152 L-04.4-15 SEC 046
11 EB-2016-0152 J15.5 Attachment 3
12 EB-2016-0152 J15.5 Attachment 2
13 Final In-Service Date means either the current forecast of the final date for in-service and close out of project, or the historical final project in-service date (but not the final project close out date which may not have yet occurred).
14 Life Time to Date (LTD) means in service amounts as of Dec 31, 2019

Numbers may not add due to rounding.

Table 1b
Capital Project Listing - Nuclear Operations Facility Projects
Projects ≥ $20M Total Project Cost[1]

Line No.	Facility	Project Name	Project Number	Category	Start Date	Final In-Service Date[10]	Total Project Cost[2] (M$)	Total Project Cost - EB-2016-0152 (M$)	1st Execution Business Case[5] ($M)	1st Execution Business Case EB-2016-0152[5] ($M)	Total In-Service ($M)	In-Service LTD[11] ($M)	In-Service IR Term ($M)	In-Service 2020 ($M)	In-Service 2021 ($M)	In-Service 2022 ($M)	In-Service 2023 ($M)	In-Service 2024 ($M)	In-Service 2025 ($M)	In-Service 2026 ($M)
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)	(s)	(t)
		ONGOING PROJECTS FROM EB-2016-0152																		
26	DN	DN Primary Heat Transport Pump Motor Overhaul [7]	80144	Sustaining	Jul-15	Oct-21	53.3	129.5	102.8	102.8	43.8	34.1	0.0	3.5	6.2	0.0	0.0	0.0	0.0	0.0
27	PN	PB Emergency Power Generator and Main Output Power Protective Relay Replacement	40691	Sustaining	Feb-12	Oct-19	29.7	11.0	7.5	7.5	25.2	25.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
28		**Subtotal**					1,314.0						353.3	46.9	100.8	80.8	64.0	101.1	63.9	43.6
		COMPLETED/DEFERRED/CANCELLED FROM EB-2016-0152																		
29	DN	DN Operations Support Building Refurbishment	25619	Sustaining	Mar-09	Nov-15	61.3	62.7	47.8	47.8	59.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
30	DN	DN Fukushima Phase 1 Beyond Design Basis Event Emergency Mitigation Equipment [3]	31508	Regulatory	Sep-11	Apr-18	55.5	52.9	29.1	27.3	55.5		0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
31	DN	DN Condenser Circulating Water and Low Pressure Service Water Travelling Screens Replacement	31552	Sustaining	May-13	Nov-18	33.0	37.6	24.4	24.4	33.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
32	DN	DN Improve Maintenance Facilities at Darlington (Capital)	31717	Sustaining	Aug-07	Nov-13	35.6	43.2	49.8	49.8	33.5		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
33	DN	DN Fukushima Phase 2 Beyond Design Basis Event Emergency Mitigation Equipment [9]	32202	Regulatory	Oct-12	May-18	23.1	28.0	28.0	28.0	21.9		0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0
34	DN	Shutdown System Computer Aging Management	33955	Sustaining	Nov-06	Dec-15	20.3	20.3	17.2	17.2	20.3		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35	DN	DN Purchase of Primary Heat Transport Pump Motor Capital Spares	36001	Sustaining	Apr-10	Oct-15	27.6	30.8	12.0	12.0	27.6		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36	DN	DN Holt Road Interchange Upgrade	73706	Value Enhancing	Nov-13	Aug-16	26.7	28.6	31.0	31.0	26.7		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37	DN	DN Generator Stator Core Spare	80111	Sustaining	Sep-15	Jul-19	30.8	35.0	35.0	35.0	30.8		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38	PN	PB Fuel Handling Reliability Modifications	40976	Sustaining	Aug-12	Dec-18	40.4	37.3	29.0	29.0	39.3		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39	PN	Unit 1 & 4 Fuel Channel East Pressure Tube Shift Tooling [4]	41023	Sustaining	Oct-12	Dec-16	27.7	38.6	22.0	22.0	27.7		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40	PN	PN Fukushima Phase 2 Beyond Design Basis Event Emergency Mitigation Equipment [9]	41027	Regulatory	Oct-12	Nov-17	49.7	46.3	46.3	46.3	49.7		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
41	PN	PA Fuel Handling Single Point of Vulnerabilty Equipment Reliability Improvement Project - Capital	46634	Sustaining	Feb-11	Dec-18	21.2	27.3	27.0	27.0	20.9		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42	PN	PB Fukushima Phase 1 Beyond Design Basis Event Emergency Mitigation Equipment [3]	49158	Regulatory	Sep-11	Oct-17	41.7	58 [6]	29.3	29.3	41.7		0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0
43	SEC	Physical Barrier System	25609	Regulatory	Nov-05	Dec-13	67.2	67.2	37.0	37.0	67.2		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44	IRI	PN Machine Delivered Scrape	66600	Value Enhancing	Feb-14	Oct-18	27.0	26.1 [8]	24.9	24.9	27.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45		**Subtotal**					588.9						0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0

Notes:

1 Projects with expenditures during IR term OR In-Service Amounts in Bridge or IR term, AND Completed/Deferred Projects at the time of preparing the Amended 2020-2026 Business Plan (from EB-2016-0152 or subsequent).

2 Total Project Cost reflects BCS amounts at the time of preparing the Amended 2020-2026 Business Plan, with the exception of Completed/Deferred/Cancelled Projects (for which actual costs are shown). BCS amounts reflect point estimates or, if range estimate or no estimate is provided in lieu of a point estimate, the current estimate of total project cost

3 Projects 31508, 49158 and 49299 are combined in a single Business Case Summary of $70M. First execution BCS amounts are derived from the combined amount.

4 Projects 41023 and 49247 are combined in a single Business Case Summary. Project 49247 is from Ex. D2-1-3 Table 2 in EB-2013-0321
First execution BCS amounts are derived from the combined amount

5 The designation of "n/a" means the project has not advanced to a First Execution BCS

6 Project 49158 was combined with Project 49299 and Project 31508. Total project cost for project 49158 was $44.0M

7 Projects 73566 ($84.0M), 36001 ($27.6M) and 80144 ($53.3M) are combined in a single Business Case Summary ($164.9M). In EB-2016-0152
project 73566 and project 80144 were included in Ex D2-1-3 Table 1 with a combined project cost of $129.5M, while #36001 project cost was $30.8M. First execution BCS amounts are derived from the combined amount

8 EB-2016-0152 L-04.2-1 Staff 043

9 Projects 41027 and 32202 were combined into a single BCS. First execution BCS amounts are derived from the combined amount

10 Final In-Service Date means either the current forecast of the final date for in-service and close out of project, or the historical final project in-service date (but not the final project close out date which may not have yet occurred).

11 Life Time to Date (LTD) means in service amounts as of Dec 31, 2019

Numbers may not add due to rounding.

Table 1c
Capital Project Listing - Nuclear Operations Facility Projects
Projects ≥ $20M Total Project Cost[1]

Line No.	Facility	Project Name	Project Number	Category	Start Date	Final In-Service Date[4]	Total Project Cost[2] (M$)	1st Execution Business Case[3] ($M)	Total In-Service ($M)	In-Service LTD[5] ($M)	In-Service IR Term ($M)	In-Service 2020 ($M)	In-Service 2021 ($M)	In-Service 2022 ($M)	In-Service 2023 ($M)	In-Service 2024 ($M)	In-Service 2025 ($M)	In-Service 2026 ($M)
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		PROJECTS NOT IN EB-2016-0152																
46	DN	DN Main Power Output Protection System Replacement	80122	Sustaining	Sep-16	Aug-27	65.0	n/a	88.4	0.0	75.0	0.0	0.0	0.0	15.0	20.0	20.0	20.0
47	DN	DN Group II Pressure Transmitter Replacement	80123	Sustaining	Jan-16	Jan-28	47.7	n/a	37.5	0.0	29.0	0.0	2.0	5.8	5.8	5.8	5.8	5.8
48	DN	DN Obsolete Controller Replacement	80124	Sustaining	Jun-17	Dec-26	38.0	38.0	28.5	5.4	13.1	4.9	4.8	3.9	3.0	3.7	2.0	0.5
49	DN	DN Emergency Power Generator 1 and 2 Replacement	80126	Regulatory	Feb-17	May-22	176.2	176.2	180.8	19.4	89.4	72.0	0.0	89.4	0.0	0.0	0.0	0.0
50	DN	DN Fuel Handling Computer Input/Output Subsystem and Interprocessor Communication Replacement	80148	Sustaining	Dec-15	Apr-27	23.4	n/a	22.1	0.0	21.0	0.0	0.0	1.6	0.4	2.0	14.0	3.0
51	DN	DN Fire Resistant Fluid Pump Improvement	80150	Sustaining	Jan-16	Nov-25	30.0	n/a	25.0	0.0	25.0	0.0	0.0	8.5	6.5	5.0	5.0	0.0
52	DN	DN Class 1 Rectifier Replacement	82883	Sustaining	May-18	Dec-32	42.3	n/a	36.3	0.0	17.0	0.0	0.0	3.0	3.5	3.5	3.5	3.5
53	DN	DN Main Power Output and Class IV Transformer Control Cabinet Wiring Replacement	82890	Sustaining	Jan-19	Deferred	26.8	n/a	24.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
54	DN	DN Fuel Handling Head Major Component Replacement	82947	Sustaining	Oct-18	May-27	98.0	n/a	60.9	0.0	59.0	0.0	0.0	0.0	20.0	13.0	13.0	13.0
55	DN	DN Copper Piping Replacement	83049	Sustaining	Aug-16	Dec-22	45.1	29.3	43.7	28.7	6.0	2.7	6.3	6.0	0.0	0.0	0.0	0.0
56	DN	DN Fuel Handling Power and Signal Cable Catenary Replacement	83052	Sustaining	Apr-19	Jan-27	24.6	n/a	11.9	0.00	8.7	0.0	2.5	8.5	0.2	0.0	0.0	0.0
57	DN	DN Powerhouse Upper Level Service Water Piping Replacement	83053	Sustaining	Oct-16	Jan-25	75.2	55.7	66.7	16.2	50.5	1.9	0.0	13.0	16.5	2.5	16.0	2.5
58	DN	DN Phase 2 Station Battery Replacement	83076	Sustaining	Aug-16	Dec-28	34.5	18.9	26.2	0.3	18.6	1.3	2.7	4.9	3.9	3.5	3.2	3.0
59	DN	DN Main Output Transformer & Unit Service Transformer Replacement	83296	Sustaining	Jul-18	Jun-24	170.1	170.1	131.2	0.0	98.4	0.0	32.8	65.6	28.7	4.0	0.1	0.0
60	DN	DN Large Moderator Temperature Control Valve Replacement	83297	Sustaining	Nov-18	Jun-26	36.9	n/a	31.2	0.0	26.2	0.0	5.0	5.0	9.0	5.0	7.2	0.0
61	DN	DN Secondary System High Priority Control Valve Replacement	83298	Sustaining	Mar-18	Dec-27	35.4	n/a	29.6	0.0	26.5	0.0	3.2	3.2	9.5	8.5	5.3	0.0
62	DN	DN Condenser Steam Discharge Valve Control System Replacement	83299	Sustaining	Jan-19	Dec-27	29.7	n/a	22.8	0.0	18.5	0.0	0.0	5.3	2.6	7.9	2.6	0.0
63	DN	DN 4kV Motor Refurbishment and Replacement	83480	Sustaining	Oct-18	Jun-28	278.8	n/a	172.1	0.0	89.8	0.0	0.0	11.8	19.0	15.0	17.0	27.0
64	DN	DN Isolated Phase Bus Refurbishment	83484	Sustaining	Jul-20	Jun-28	62.4	n/a	36.5	0.0	22.9	0.0	0.0	0.0	0.0	8.8	0.0	14.2
65	DN	DN Turbine Hall Crane Controls Upgrade	83556	Sustaining	Dec-17	Dec-20	23.6	19.7	23.1	0.0	0.0	22.2	0.0	0.0	0.0	0.0	0.0	0.0
66	DN	DN Fuel Handling Service Area Bridge F5 Ball Screw Assembly Replacement	83558	Sustaining	Mar-18	Jun-25	28.2	n/a	12.5	0.0	11.8	0.0	0.0	0.0	4.6	5.4	1.8	0.0
67	DN	DN East Irradiated Fuel Bay Permanent Fuel Inspection Equipment	83559	Regulatory	Mar-18	May-22	25.0	25.0	17.9	0.0	8.9	0.0	9.0	8.9	0.0	0.0	0.0	0.0
68	DN	DN Unit 2 Turbine Control & Aux Systems Upgrade	83664	Sustaining	Dec-19	Jul-25	112.7	n/a	102.2	0.0	102.1	0.0	0.0	0.0	0.0	0.0	102.1	0.0
69	DN	DN Fuel Handling Replacement of Fuelling Machine Calibration Facility	83916	Sustaining	Feb-19	Jul-25	22.4		22.4	0.0	22.4	0.0	0.0	0.0	2.5	9.9	9.9	0.0
70	DN	DN Air Operated Valve Replacement	84009	Sustaining	Mar-20	Dec-28	85.7	n/a	82.9	0.0	39.5	0.0	0.0	12.5	0.0	8.0	13.5	5.5
71	DN	DN Primary Heat Transport Liquid Relief Valve Modifications (Waterhammer)	84235	Regulatory	Jan-19	Jul-26	86.8	85.9	70.5	24.422	43.5	2.6	0.0	11.5	13.7	2.9	12.2	3.3

Notes:

1 Projects with expenditures during IR term OR In-Service Amounts in Bridge or IR term, AND Completed/Deferred Projects at the time of preparing the Amended 2020-2026 Business Plan (from EB-2016-0152 or subsequent).

2 Total Project Cost reflects BCS amounts at the time of preparing the Amended 2020-2026 Business Plan, with the exception of Completed/Deferred/Cancelled Projects (for which actual costs are shown). BCS amounts include minor removal costs and reflect point estimates or, if range estimate or no estimate is provided in lieu of a point estimate, the current estimate of total project cost

3 The designation of "n/a" means the project has not advanced to a First Execution BCS

4 Final In-Service Date means either the current forecast of the final date for in-service and close out of project, or the historical final project in-service date (but not the final project close out date which may not have yet occurred).

5 Life Time to Date (LTD) means in service amounts as of Dec 31, 2019

Numbers may not add due to rounding.
Privileged and confidential. Prepared in contemplation of litigation.

Table 1d
Capital Project Listing - Nuclear Operations Facility Projects
Projects ≥ $20M Total Project Cost[1]

Line No.	Facility	Project Name	Project Number	Category	Start Date	Final In-Service Date[4]	Total Project Cost[2] (M$)	1st Execution Business Case[3] ($M)	Total In-Service ($M)	In-Service LTD[5] ($M)	In-Service IR Term ($M)	In-Service 2020 ($M)	In-Service 2021 ($M)	In-Service 2022 ($M)	In-Service 2023 ($M)	In-Service 2024 ($M)	In-Service 2025 ($M)	In-Service 2026 ($M)
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)	(q)	(r)
		PROJECTS NOT IN EB-2016-0152																
72	DN	DN Motor Operated Valve Replacement	84551	Sustaining	Mar-20	Dec-28	44.5	n/a	37.5	0.0	29.3	0.0	0.0	7.0	7.0	5.3	7.0	3.2
73	DN	DN Primary Heat Transport Pump Rotor Inspection and Replacement	84799	Sustaining	May-20	Oct-26	89.2	89.2	46.4	0.0	46.4	0.0	0.0	0.0	15.3	12.5	18.4	0.2
74	DN	DN Revenue Metering Transformer Replacement	84939	Regulatory	Apr-20	Oct-26	35.9	n/a	25.5	0.0	25.5	0.0	0.0	0.0	0.0	3.4	6.9	15.2
75	PN	PN P58 Buried Blowdown Piping Replacement	83072	Sustaining	Nov-16	Dec-20	20.9	20.9	16.6	0.0	0.0	16.6	0.0	0.0	0.0	0.0	0.0	0.0
76	PN	PA Low Pressure Feedwater Heat Exchanger Replacement	83088	Sustaining	May-16	May-18	22.0	19.4	20.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77	PN	PN High Pressure Turbine Spindle Capital Spares	83668	Sustaining	Nov-17	Aug-19	21.3	23.4	21.3	21.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
78	SEC	Security Project B	82929	Sustaining	Jun-16	Sep-21	32.7	32.7	28.8	0.8	0.1	3.1	24.8	0.1	0.0	0.0	0.0	0.0
79	SEC	Security Project C	82930	Sustaining	Jun-16	Mar-21	22.9	22.9	18.9	0.0	0.0	3.1	15.8	0.0	0.0	0.0	0.0	0.0
80	IRI	DN Rapid Delivery Machine	83039	Sustaining	Nov-14	May-25	162.2	n/a	118.4	0.0	113.2	5.2	0.0	0.0	83.6	0.0	29.5	0.0
81	ENG	Fleet Monitoring Initiative (Monitoring & Diagnostic Centre)	83828	Sustaining	Mar-18	Jul-23	29.3	n/a	23.7	0.0	16.0	2.7	5.0	6.0	10.0	0.0	0.0	0.0
82		**Subtotal**					2,205.8				1,153.2	138.2	114.0	281.4	280.4	155.6	316.0	119.8
83		**Total**					4,108.7				1,506.6	187.0	214.8	362.2	344.4	256.7	379.9	163.4
		DIVISION TOTALS:																
84		**Darlington**									1,377.4	155.6	169.2	356.2	250.7	256.7	350.4	163.4
85		**Pickering**									0.0	17.3	0.0	0.0	0.0	0.0	0.0	0.0
86		**Operations and Project Support**									129.2	14.2	45.6	6.0	93.6	0.0	29.5	0.0
87		**Total**									1,506.6	187.0	214.8	362.2	344.4	256.7	379.9	163.4

Notes:
1 Projects with expenditures during IR term OR In-Service Amounts in Bridge or IR term, AND Completed/Deferred Projects at the time of preparing the Amended 2020-2026 Business Plan (from EB-2016-0152 or subsequent).
2 Total Project Cost reflects BCS amounts at the time of preparing the Amended 2020-2026 Business Plan, with the exception of Completed/Deferred/Cancelled Projects (for which actual costs are shown). BCS amounts include minor removal costs and reflect point estimates or, if range estimate or no estimate is provided in lieu of a point estimate, the current estimate of total project cost
3 The designation of "n/a" means the project has not advanced to a First Execution BCS
4 Final In-Service Date means either the current forecast of the final date for in-service and close out of project, or the historical final project in-service date (but not the final project close out date which may not have yet occurred).
5 Life Time to Date (LTD) means in service amounts as of Dec 31, 2019

Numbers may not add due to rounding.

Table 2a
Capital Project Listing - Nuclear Operations Facility Projects
Projects $5M - $20M Total Project Cost[1]

Line No.	Facility	Project Name	Project Number	Category	Project Description	Start Date	Final In-Service Date[3]	Total Project Cost[2] ($M)	In-Service IR Term ($M)	In-Service 2020 ($M)	In-Service 2021 ($M)	In-Service 2022 ($M)	In-Service 2023 ($M)	In-Service 2024 ($M)	In-Service 2025 ($M)	In-Service 2026 ($M)
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
		ONGOING PROJECTS FROM EB-2016-0152														
1	DN	DN Active Liquid Waste System Upgrade	31403	Regulatory	Add aeration and chemical addition to the active liquid waste management system to ensure compliance with discharge criteria.	Nov-09	Dec-22	12.1	6.9	0.0	0.0	6.6	0.4	0.0	0.0	0.0
2	DN	DN Dryer Programmable Logic Controller Replacement	31420	Sustaining	Replace obsolete programmable logic controllers.	Feb-14	Aug-24	12.2	4.2	3.3	1.4	0.7	1.6	1.4	0.5	0.0
3	DN	DN Pressurizer Heaters & Controllers Replacement Project	31422	Sustaining	Replace electrical heaters in pressurizers that are at the end of their expected life.	Apr-11	Dec-21	13.9	0.1	0.0	1.0	0.1	0.0	0.0	0.0	0.0
4	DN	DN Containment Button-up Activity Monitors Replacement	31432	Sustaining	Replace aging and obsolete radioactivity monitors used to button up the Negative Pressure Containment System on high activity.	Nov-13	Mar-21	9.9	0.0	1.9	2.0	0.0	0.0	0.0	0.0	0.0
5	DN	DN Computer Upgrade for Heavy Water Management System (Tritium Removal Faclity / Site Upgrader)	31436	Sustaining	Upgrade obsolete Heavy Water Management System computers that control Tritium Removal Facility and Station Upgrader operations.	Oct-12	Nov-21	8.2	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0
6	DN	DN Replacement of Obsolete Online Chemistry Analysers	31520	Sustaining	Replace obsolete online chemistry analysers	Oct-12	Jan-21	16.7	0.0	3.9	1.9	0.0	0.0	0.0	0.0	0.0
7	DN	DN Tritium Removal Facility Deuterium Make-up System Electrolyzer Replacement	31522	Sustaining	Replace aged and obsolete TRF DMS Electrolyzer, to ensure reliability to the end of facility operation.	Nov-12	Oct-19	14.5	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
8	DN	DN Feeder Scanner Replacement	31526	Sustaining	Replace the equipment that scans the feeders to locate channels containing failed fuel bundles.	Dec-12	Aug-22	18.9	2.3	0.0	3.0	2.3	0.0	0.0	0.0	0.0
9	DN	DN Reactor Regulating System Logic Module Redesign	31534	Sustaining	Redesign the Regulator Regulating System logic modules to address spurious rod movements as well as addressing obsolescence of current modules.	Dec-13	Apr-23	9.9	1.2	0.0	2.9	0.0	1.2	0.0	0.0	0.0
10	DN	DN Turbine-Generator Lube Oil Purifier Replacement	31536	Sustaining	Replace obsolete turbine lubricating oil purifier used to remove contaminants and metal from lubricating oil during operation.	Nov-12	Apr-18	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	DN	DN Feedwater Chemistry Control Improvements	31548	Sustaining	Install improved feedwater chemistry monitoring and connections for portable filtration.	Nov-13	Feb-20	14.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0
12	DN	DN Tritium Removal Facility Cryogenic Refrigeration System Turbine Oil Supply System / Turbine Replacement	31701	Sustaining	Replace the Tritium Removal Facility Cryogenic Refrigeration System turbine oil supply system and hydrogen expander turbine with a dynamic gas bearing (oilfree) turbine	Jan-14	Jun-25	12.9	3.1	0.0	0.0	0.0	0.0	0.0	3.1	0.0
	Table continues on Ex. D2-1-3 Table 2b															

Notes:
1 Projects with expenditures during IR term OR In-Service Amounts in Bridge or IR term, AND Completed/Deferred Projects at the time of preparing the Amended 2020-2026 Business Plan (from EB-2016-0152 or subsequent).
2 Total Project Cost reflects BCS amounts at the time of preparing the Amended 2020-2026 Business Plan, with the exception of Completed/Deferred/Cancelled Projects (for which actual costs are shown). BCS amounts reflect point estimates or, if range estimate or no estimate is provided in lieu of a point estimate, the current estimate of total project cost
3 Final In-Service Date means either the current forecast of the final date for in-service and close out of project, or the historical final project in-service date (but not the final project close out date which may not have yet occurred).

Numbers may not add due to rounding.

Table 2b
Capital Project Listing - Nuclear Operations Facility Projects
Projects $5M - $20M Total Project Cost[1]

Line No.	Facility	Project Name	Project Number	Category	Project Description	Start Date	Final In-Service Date[3]	Total Project Cost[2] ($M)	In-Service IR Term ($M)	In-Service 2020 ($M)	In-Service 2021 ($M)	In-Service 2022 ($M)	In-Service 2023 ($M)	In-Service 2024 ($M)	In-Service 2025 ($M)	In-Service 2026 ($M)
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
		ONGOING PROJECTS FROM EB-2016-0152 (Continued from Ex. D2-1-3 Table 2a)														
13	DN	DN Fuel Handling Power Track Platform & Maintenance Cut Out	31702	Sustaining	Construct a working platform and modify the power track structure to allow the power track equipment to be maintained during Unit 1 or Unit 4 outages as well as Unit 2 and Unit 3 outages.	Dec-13	Nov-19	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
14	DN	DN Fuel Handling Obsolete Control Relay Re-Engineer/Replacement	31704	Sustaining	Replace the obsolete Fuel Handling control relays with relays of equal quality and near identical installation to mitigate challenges to FH System reliability.	Oct-13	Jul-24	5.8	5.4	1.1	1.5	0.0	3.1	2.3	0.0	0.0
15	DN	DN Vapour Recovery Button-Up Valve Replacements	31706	Sustaining	Replace aging vapour recovery containment buttonup valves with new design less prone to passing.	Dec-13	Feb-24	16.2	16.2	0.0	0.0	0.0	15.2	0.9	0.1	0.0
16	DN	DN Auxiliary Boiler Feed Pump Seal Cooling	33224	Sustaining	Install Gland Injection Cooling flush at both pump mechanical seals, for all eight ABFPs, as well as two new mechanical seals and two heat exchanger skids at each pump.	Mar-14	Dec-21	9.7	1.0	0.9	1.0	1.0	0.0	0.0	0.0	0.0
17	DN	DN Hydrogen Cooling Temperature Control Valve TCV20 Redesign	33228	Sustaining	Replace Hydrogen Cooling temperature control system butterfly valve with a new type of control valve and controller, to address the reliability of the system during seasonal lake water temperature fluctuations.	Nov-12	Jun-21	16.2	0.3	0.0	1.0	0.3	0.0	0.0	0.0	0.0
18	DN	Fuel Handling Computer Replacement	33815	Sustaining	Replace obsolete components of the fuel handling system control computers.	Aug-05	Nov-21	15.6	0.4	0.0	0.7	0.4	0.0	0.0	0.0	0.0
19	DN	DN Central Services Area Sewage Line and Sump Emergency Connections	38466	Sustaining	Replace corroded and degraded sewage piping from Central Services Area and add emergency connections to allow sewage truck to empty sump in emergencies.	Jul-13	Dec-28	7.9	1.5	0.0	0.0	0.0	0.0	0.0	0.3	1.3
20	DN	DN Feeder Scanner Replacement	80070	Sustaining	Replace permanent feeder scanner equipment with portable system that can be setup outside of containment prior to use.	May-14	Aug-22	18.9	2.1	0.0	5.5	2.1	0.0	0.0	0.0	0.0
21	DN	DN Fire Hazard Assessment and Fire Safe Shutdown Analysis Modifications	80151	Regulatory	Implement modifications required for compliance to Canadian Standards Association N29307 Fire Protection for Nuclear Power Plants identified during the Integrated Safety Review and committed in the Integrated Implementation Plan.	Nov-15	Sep-21	20.0	0.5	0.0	11.7	0.5	0.0	0.0	0.0	0.0
22	DN	DN Vault Cooling Coil Replacement	82816	Regulatory	Replace leaking and degraded cooling coils in the containment vault, which impairs the functions of maintaining vault temperatures during normal operation and removing heat from the steam-laden atmosphere in Loss of Coolant Accident conditions.	Dec-15	Jul-19	17.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	DN	DN Irradiated Fuel Discharge Mechanism Major Component Replacement	82841	Sustaining	Replace the shuttle cylinders and other major components of the Irradiated Fuel Discharge system which are approaching end of design life.	Nov-15	Feb-24	5.9	2.3	0.0	1.7	0.0	0.0	2.3	0.0	0.0
	Table continues on Ex. D2-1-3 Table 2c															

Notes:
1 Projects with expenditures during IR term OR In-Service Amounts in Bridge or IR term, AND Completed/Deferred Projects at the time of preparing the Amended 2020-2026 Business Plan (from EB-2016-0152 or subsequent).
2 Total Project Cost reflects BCS amounts at the time of preparing the Amended 2020-2026 Business Plan, with the exception of Completed/Deferred/Cancelled Projects (for which actual costs are shown). BCS amounts reflect point estimates or, if range estimate or no estimate is provided in lieu of a point estimate, the current estimate of total project cost
3 Final In-Service Date means either the current forecast of the final date for in-service and close out of project, or the historical final project in-service date (but not the final project close out date which may not have yet occurred).

Numbers may not add due to rounding.

Table 2c
Capital Project Listing - Nuclear Operations Facility Projects
Projects $5M - $20M Total Project Cost[1]

Line No.	Facility	Project Name	Project Number	Category	Project Description	Start Date	Final In-Service Date[3]	Total Project Cost[2] ($M)	In-Service IR Term ($M)	In-Service 2020 ($M)	In-Service 2021 ($M)	In-Service 2022 ($M)	In-Service 2023 ($M)	In-Service 2024 ($M)	In-Service 2025 ($M)	In-Service 2026 ($M)
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
		ONGOING PROJECTS FROM EB-2016-0152 (Continued from Ex. D2-1-3 Table 2a)														
24	PN	PA Standby Generator Reliability Upgrades	40972	Sustaining	Improve reliability and availability of the unit 012/034 Standby Generators (SG) by addressing obsolescence, lack of spare parts, maintenance and performance issues.	Apr-12	Dec-21	19.0	0.0	4.7	6.7	0.0	0.0	0.0	0.0	0.0
25	PN	PNGS Daily Tritium Sampler Replacement	40977	Regulatory	Replace unreliable, inaccurate and obsolete Airborne Tritium Samplers with improved models having silica gel column, to ensure reliable airborne tritium monitoring to the end of facility operation.	Apr-12	Aug-18	6.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
26	PN	PN Replacement of Obsolete Online Chemistry Analysers	40985	Sustaining	Replace obsolete online chemistry analyzers.	Mar-13	Aug-19	18.5	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0
27	PN	PA Replacement of Auxiliary Irradiated Fuel Bay Supertool	40987	Sustaining	Replace the Auxiliary Irradiated Fuel Bay (AIFB) Supertool, which is a telescopic lifting tool used to irradiated fuel baskets and storage modules within the AIFB. Unavailability impacts fuelling activities and the movement of fuel into Dry Storage Modules.	May-12	Dec-20	5.2	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0
28	PN	PA Standby Generator Protective Relay Upgrade	41044	Sustaining	Replace obsolete electromechanical protective relays with digital units.	Jan-14	Oct-19	11.4	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
29	PN	PB Replacement of Obsolete Instrumentation and Control Equipment	49154	Sustaining	Replace critical obsolete instrumentation and control equipment.	Aug-11	Mar-21	6.8	0.0	1.9	0.9	0.0	0.0	0.0	0.0	0.0
30	PN	PB Fukushima Emergency Telecommunications Enhancement	49161	Regulatory	Install a new telecommunications system that is portable and rapidly deployable at all onsite and offsite locations required for emergency response during a beyond design basis event.	Jun-12	Dec-17	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
31		**Subtotal**						363.2	47.7	21.5	45.4	14.0	21.5	7.0	3.9	1.3
	Table continues on Ex. D2-1-3 Table 2d															

Notes:
1 Projects with expenditures during IR term OR In-Service Amounts in Bridge or IR term, AND Completed/Deferred Projects at the time of preparing the Amended 2020-2026 Business Plan (from EB-2016-0152 or subsequent).
2 Total Project Cost reflects BCS amounts at the time of preparing the Amended 2020-2026 Business Plan, with the exception of Completed/Deferred/Cancelled Projects (for which actual costs are shown). BCS amounts reflect point estimates or, if range estimate or no estimate is provided in lieu of a point estimate, the current estimate of total project cost
3 Final In-Service Date means either the current forecast of the final date for in-service and close out of project, or the historical final project in-service date (but not the final project close out date which may not have yet occurred).

Table 2d
Capital Project Listing - Nuclear Operations Facility Projects
Projects $5M - $20M Total Project Cost[1]

Line No.	Facility	Project Name	Project Number	Category	Project Description	Start Date	Final In-Service Date[3]	Total Project Cost[2] ($M)	In-Service IR Term ($M)	In-Service 2020 ($M)	In-Service 2021 ($M)	In-Service 2022 ($M)	In-Service 2023 ($M)	In-Service 2024 ($M)	In-Service 2025 ($M)	In-Service 2026 ($M)
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
		COMPLETED/CANCELLED PROJECTS FROM EB-2016-0152														
32	DN	DN Passive Auto-Catalytic Recombiners	31306	Regulatory	Install passive autocatalytic recombiners for longterm postaccident hydrogen mitigation.	Dec-09	Nov-18	5.8	0.0	(0.1)	0.0	0.0	0.0	0.0	0.0	0.0
33	DN	DN Tritium Removal Facility Cryogenic Refrigeration System Hydrogen Compressors Condition Monitoring System	31410	Value Enhancing	Install a realtime condition monitoring system on the Cryogenic Refrigeration System (CRS) Hydrogen Compressors for predictive maintenance, to allow proactive intervention and thereby extend the operation time between planned TRF outages potentially from every 1.5 years to a target of every 2 years.	Oct-12	Oct-17	6.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34	DN	DN Fukushima Emergency Telecommunications Enhancement	31512	Regulatory	Install a new telecommunications system that is portable and rapidly deployable at all onsite and offsite locations required for emergency response during a beyond design basis event.	Jun-12	Dec-17	7.4	0.0	(0.1)	0.0	0.0	0.0	0.0	0.0	0.0
35	DN	DN Permanent Detectors for Startup Instrumentation	31528	Value Enhancing	Install permanent startup instrumentation detectors, thereby eliminating outage time and worker dose to install and remove temporary detectors.	Oct-13	Cancelled	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
36	DN	DN Main Output Transformer / Unit Service Transformer / System Service Transformer /10MVA Spare Transformer Storage Facility	31530	Sustaining	Construct a transformer storage facility within the unzoned area of the protected area, to ensure transportation to an affected unit within 5 days and minimize the impact of surveillance routines as well as periodic maintenance on spare transformers.	Dec-12	May-17	6.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
37	DN	Replacement of Obsolete Computer Components	33509	Sustaining	Replace obsolete components of the digital control computers.	Jun-00	Jun-19	9.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
38	DN	DN Installation of partial discharge monitors	33623	Sustaining	Provide a means of assessing stator winding conditions in the Main Generator and Primary Heat Transport Pump Motors.	May-07	Feb-14	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39	DN	DN Main Outpur Transforment Capital Spares	36002	Sustaining	Mitigate the risk of a forced outage due to Main Output Transformer failure by acquiring two spare transformer phases to facilitate a planned refurbishment programme.	Aug-11	Mar-17	8.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
40	DN	DN Emergency Power Generator Power Turbine Capital Spare	36004	Regulatory	Purchase a spare Emergency Power Generator power turbine to mitigate risk of engine failure.	May-13	Cancelled	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
41	DN	Tritium Removal Facility Tritium Emissions Reduction Project	38942	Sustaining	Install an adsorbent dryer system and improved stack monitoring to reduce tritium emissions	Oct-12	Apr-16	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
42	DN	DN Emergency Service Water Pipe and Component Replacement	73397	Sustaining	Replacement of degraded Emergency Service Water piping, valves and tanks during the 2015 Vacuum Building Outage.	Feb-14	Jan-16	6.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
43	DN	DN BU55/56 Maintenance	73399	Sustaining	Perform refurbishment of 0-553150-BU55 and -BU56, whose condition assessment identified the risk of failure due to connection/joint and insulation age-related degradation.	Jun-13	Cancelled	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44	DN	DN DX-750 Spacer Retrieval CFFA	82949	Regulatory	Develop tooling for the retrieval of fuel channel spacer during unit refurbishment	Sep-20	Nov-20	6.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
45	PN	PB Main Generator Automatic Voltage Regulator and Protective Relay Upgrade	40680	Sustaining	Replace analog automatic voltage regulator and electromechanical protective relays with new digital devices.	Feb-10	Jul-15	18.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
46	PN	PB Machine Guarding Improvement on Low Risk Equipment	40983	Regulatory	Install machine guarding on equipment to comply with Ministry of Labour requirements.	Nov-12	Apr-18	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
47	PN	PA Emergency Core Injection Strainer Capacity Margin	40984	Regulatory	Improve capacity of the emergency coolant injection system strainers to improve design margins.	May-12	May-13	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
48	PN	PN Emergency Power Generator Engine Replacement	41043	Sustaining	Replace the Emergency Power Generator gas turbine engines.	Dec-14	Dec-16	6.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table continues on Ex. D2-1-3 Table 2e

Notes:
1 Projects with expenditures during IR term OR In-Service Amounts in Bridge or IR term, AND Completed/Deferred Projects at the time of preparing the Amended 2020-2026 Business Plan (from EB-2016-0152 or subsequent).
2 Total Project Cost reflects BCS amounts at the time of preparing the Amended 2020-2026 Business Plan, with the exception of Completed/Deferred/Cancelled Projects (for which actual costs are shown). BCS amounts reflect point estimates or, if range estimate or no estimate is provided in lieu of a point estimate, the current estimate of total project cost
3 Final In-Service Date means either the current forecast of the final date for in-service and close out of project, or the historical final project in-service date (but not the final project close out date which may not have yet occurred).

Numbers may not add due to rounding.

Table 2e
Capital Project Listing - Nuclear Operations Facility Projects
Projects $5M - $20M Total Project Cost[1]

Line No.	Facility	Project Name	Project Number	Category	Project Description	Start Date	Final In-Service Date[3]	Total Project Cost[2] ($M)	In-Service IR Term ($M)	In-Service 2020 ($M)	In-Service 2021 ($M)	In-Service 2022 ($M)	In-Service 2023 ($M)	In-Service 2024 ($M)	In-Service 2025 ($M)	In-Service 2026 ($M)
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
		COMPLETED/CANCELLED PROJECTS FROM EB-2016-0152														
49	PN	PA Passive Auto-Catalytic Recombiners	46605	Regulatory	Install passive autocatalytic recombiners for longterm postaccident hydrogen mitigation.	Jan-10	May-14	12.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
50	PN	PB SG/EPG Fire Detection Upgrade and CO2 Suppression Removal	49116	Sustaining	Ensure fire compliance for the Standby Generator, Standby Generator Oil Pump and Emergency Water & Power System buildings including a reliiable and maintainable fire detection system.	Feb-10	Apr-16	8.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
51	PN	PB RBSW Dechlorination & MISA Cleanup	49132	Regulatory	Replace temporary dechlorination system for the Reactor Building Service Water discharge with a permanent system with improved sampling points.	Feb-10	Nov-16	15.1	0.0	(0.1)	0.0	0.0	0.0	0.0	0.0	0.0
52	PN	PB Replacement of Containment Box-up Monitors	49134	Sustaining	Replace obsolete ventilation exhaust radioactivity monitors	Dec-10	May-15	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
53	PN	PB Screenhouse Trash Bar Screen Replacement	49140	Sustaining	Upgrade trash bar screens to handle the debris currently experienced from Lake Ontario.	Mar-11	Jul-15	7.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
54	PN	PN Fire Code Compliance for Relocatable Structures in Un-Zoned Area for Pickering Station	49146	Regulatory	Ensure compliance with Canadian Standards Association N29307 Fire Protection for CANDU Nuclear Plants for relocatable structures in the unzoned area.	Dec-11	Dec-18	19.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
55	PN	Unit 1 & 4 Fuel Channel East Pressure Tube Shift Tooling	49247	Sustaining	Develop and implement tooling for the repositioning and reconfiguration of the Unit 1 & 4 pressure tubes.	Nov-09	Sep-17	8.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
56	PN	PN Standby Boiler Capacity Improvement	49267	Regulatory	Provide reliable backup heating steam.	Dec-08	Nov-15	6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
57	PN	PN Administration Building Rehab	49284	Sustaining	Complete rehabilitation of the Administration Building to support operations and postoperations activities.	Nov-09	Dec-14	18.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
58	PN	PA Class II Emergency Lighting	49296	Regulatory	Upgrade emergency lighting to meet electrical codes and address employee safety concerns.	Aug-11	Aug-15	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
59	PN	PA Replacement of Unit 1, Unit 4 and Irradiated Fuel Bay-A Stack Monitors	49298	Sustaining	Replace obsolescent stack monitors with monitors used in Pickering B.	Nov-12	May-18	12.4	0.0	(0.2)	0.0	0.0	0.0	0.0	0.0	0.0
60	PN	PA Fukushima Phase 1 Beyond Design Basis Event Emergency Mitigation Equipment	49299	Regulatory	Provide capability to respond to Beyond Design Basis Events following the events at Fukushima Daiichi Nuclear Power Plant	Sep-11	Dec-17	16.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
61	PN	PA Firewater Buried Ring Header Replacement (North Loop)	80069	Sustaining	Proactively replace buried sections of the Pickering Units 1 to 4 fire water header subject to frequent failures due to poor material selection.	Nov-14	Jul-19	9.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
62	SEC	Security Project A	25918	Regulatory	Security Protected	Jun-12	Dec-17	10.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
63	IRI	IMS CIGAR (Channel Inspection and Gauging Apparatus for Reactors) Gap System and Drive Reliability	66594	Sustaining	Improve the reliability, operability and functionality of CIGAR (Channel Inspection and Gauging Apparatus for Reactors) system..	Jun-12	Sep-18	11.7	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
64		**Subtotal**						272.7	0.0	(0.2)	0.0	0.0	0.0	0.0	0.0	0.0

Table continues on Ex. D2-1-3 Table 2f

Notes:
1 Projects with expenditures during IR term OR In-Service Amounts in Bridge or IR term, AND Completed/Deferred Projects at the time of preparing the Amended 2020-2026 Business Plan (from EB-2016-0152 or subsequent).
2 Total Project Cost reflects BCS amounts at the time of preparing the Amended 2020-2026 Business Plan, with the exception of Completed/Deferred/Cancelled Projects (for which actual costs are shown). BCS amounts reflect point estimates or, if range estimate or no estimate is provided in lieu of a point estimate, the current estimate of total project cost
3 Final In-Service Date means either the current forecast of the final date for in-service and close out of project, or the historical final project in-service date (but not the final project close out date which may not have yet occurred).

Numbers may not add due to rounding.

Table 2f
Capital Project Listing - Nuclear Operations Facility Projects
Projects $5M - $20M Total Project Cost[1]

Line No.	Facility	Project Name	Project Number	Category	Project Description	Start Date	Final In-Service Date[3]	Total Project Cost[2] ($M)	In-Service IR Term ($M)	In-Service 2020 ($M)	In-Service 2021 ($M)	In-Service 2022 ($M)	In-Service 2023 ($M)	In-Service 2024 ($M)	In-Service 2025 ($M)	In-Service 2026 ($M)
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
		PROJECTS NOT IN EB-2016-0152														
65	DN	DN Liquid Zone Control Valve Positioner Replacement	80113	Sustaining	Replace the positioners and current-to-pressure transducers on the Liquid Zone Control System control valves with digital positioners.	Dec-15	Apr-23	17.0	4.3	0.0	5.5	2.0	2.0	0.3	0.0	0.0
66	DN	DN Fuel Handling Trolley Major Auxiliary Component Replacement	82842	Sustaining	Replace various major auxiliary components on the Fuel Handling trolleys that are approaching the end of their design lives. Component failures impact on fuelling availability and nuclear safety.	Jan-17	Feb-24	18.3	15.6	0.0	2.0	3.4	4.0	8.3	0.0	0.0
67	DN	DN Buried Piping Sacrificial Anode Replacement	82881	Sustaining	Replace depleted cathodic protection anodes on buried piping systems, which could result in pipe degradation and failures if not addressed.	Jun-18	Nov-25	12.2	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0
68	DN	DN Fuel Handling Motor Replacement	82886	Sustaining	Replace fuel handing system motors critical for the operation of various fuel handling systems that are nearing the end of their design lives.	Jan-17	Apr-23	16.9	16.5	0.0	0.3	0.3	2.0	7.0	7.2	0.0
69	DN	DN Liquid Injection Safey System Ball Position Detection System Replacement	82887	Regulatory	Replace obsolescent components of the Liquid Injection Safety System tank ball position detection system, which provides the main control room indication of the operational state of Shutdown System 2.	Dec-17	Mar-21	5.0	1.4	0.0	0.4	0.6	0.6	0.1	0.0	0.0
70	DN	DN Post-Accident Water Cooling System Heat Exchanger Replacement	82891	Sustaining	Replace the heat exchangers which are degraded, with leaks and reduced thermal efficiency. Further degradation may result in unavailability of the heat exchangers, which could force a 4 unit shutdown.	Nov-18	Mar-23	6.3	0.0	2.4	0.1	0.0	0.0	0.0	0.0	0.0
71	DN	DN Tritium Removal Facility Analyzer and Cryogenic Temperature Equipment Replacement	82893	Sustaining	Replace the oxygen analyzer and cryogenic temperature equipment, which are obsolescent, have legacy operational issues and are required for compliance with hydrogen codes and standards.	Jul-18	Jan-25	5.1	3.5	0.0	0.0	0.0	3.5	0.0	0.0	0.0
72	DN	DN Heavy Water Management System Computer Distributed Control Units Replacement	83288	Sustaining	Upgrade and/or replace the Distributed Control Units required for the monitoring and control of TRF, Upgrader and Heavy Water Management Building systems.	Jan-18	Sep-24	18.8	8.4	0.0	2.4	0.0	4.5	0.0	3.9	0.0
73	DN	DN Irradiated Fuel Bay Cooling and Purification Pump Replacement	83483	Sustaining	Replace the pumps used to circulate Irradiated Fuel Bay water through the cooling circuits and thereby remove the decay heat generated by the irradiated fuel.	Dec-17	Sep-21	6.9	6.1	0.0	0.7	0.0	3.5	2.6	0.0	0.0
74	DN	DN Tritium Removal Facility Water Air Conditioning Units Replacement	83560	Sustaining	Replace the air conditioning units used to provide cooling for the environment in the control room and equipment rooms.	May-18	Dec-19	10.0	3.4	0.0	0.0	3.3	0.1	0.0	0.0	0.0
75	DN	DN Tritium Removal Facility Training Simulator	83650	Sustaining	Development and installation of a Tritium Removal Facility training simulator.	Nov-17	Aug-25	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
76	DN	DN Radiation Detection Equipment Obsolescence - Moderator Cover Gas Monitors & Fixed Area Alarming Gamma Monitors	84399	Sustaining	Replace both systems with new and modern equipment, since the existing equipment is obsolete and approaching the end of their useful design life.	Nov-19	Dec-23	18.0	11.3	0.0	0.0	0.0	11.3	0.0	0.0	0.0
77	DN	DN Radiation Detection Equipment Obsolescence - Active Liquid Waste Liquid Effluent Monitor, D_2O in H_2O & Online Gas Chromatograph	84400	Sustaining	Replace the three systems with new and modern equipment, since the existing equipment is obsolete and approaching the end of their useful design life.	Nov-19	Sep-23	15.0	14.1	0.0	0.0	13.0	1.1	0.0	0.0	0.0
78	DN	DN Shutdown System 1 and Reactor Regulating System Ion Chamber Replacements	83937	Sustaining	Replace the aging Shutdown System 1 and Reactor Regulating System ion chambers that measure neutron flux in the reactor for trip parameter and reactor regulation purposes.	Dec-18	Dec-28	11.3	2.3	0.0	0.4	0.4	0.4	0.5	0.6	0.4

Table continues on Ex. D2-1-3 Table 2g

Notes:
1 Projects with expenditures during IR term OR In-Service Amounts in Bridge or IR term, AND Completed/Deferred Projects at the time of preparing the Amended 2020-2026 Business Plan (from EB-2016-0152 or subsequent).
2 Total Project Cost reflects BCS amounts at the time of preparing the Amended 2020-2026 Business Plan, with the exception of Completed/Deferred/Cancelled Projects (for which actual costs are shown). BCS amounts reflect point estimates or, if range estimate or no estimate is provided in lieu of a point estimate, the current estimate of total project cost
3 Final In-Service Date means either the current forecast of the final date for in-service and close out of project, or the historical final project in-service date (but not the final project close out date which may not have yet occurred).

Numbers may not add due to rounding.

Table 2g
Capital Project Listing - Nuclear Operations Facility Projects
Projects $5M - $20M Total Project Cost[1]

Line No.	Facility	Project Name	Project Number	Category	Project Description	Start Date	Final In-Service Date[3]	Total Project Cost[2] ($M)	In-Service IR Term ($M)	In-Service 2020 ($M)	In-Service 2021 ($M)	In-Service 2022 ($M)	In-Service 2023 ($M)	In-Service 2024 ($M)	In-Service 2025 ($M)	In-Service 2026 ($M)
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
		PROJECTS NOT IN EB-2016-0152														
79	DN	DN Fuelling Maching Duct & Central Service Area Air Conditioning Unit Replacement	84006	Sustaining	Replace aging and degraded fan motors and cooling coils for the Fuelling Machine Duct and Central Service Area Air Conditioning Units (ACUs) nto ensure reliable operation.	Aug-19	Aug-21	18.3	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
80	DN	DN Emergency Power System Enhancements	84378	Sustaining	Install improvements to Darlington Emergency Power Generator EPG3, to enhance operation and ensure long term reliability of the EPG3 machine for a safe station operation.	Apr-19	Apr-24	10.2	0.1	0.0	5.8	0.1	0.0	0.0	0.0	0.0
81	DN	DN Containment Penetrations and Fiber Optics Installation	84586	Sustaining	Install new containment penetrations, with fibre optics and 120V power, to improve bandwidth and expand coverage of the existing communications network.	Sep-19	Oct-26	9.0	4.9	0.0	2.5	1.4	1.1	2.5	0.0	0.0
82	DN	DN Main Power Output Transformer Fire Containment System Upgrade	86055	Sustaining	Install upgraded Darlington Main Power Output Transformers Fire Containment System to improve deluge functionality and comply with Fire Codes.	Jul-20	Aug-21	20.0	20.0	0.0	0.0	0.0	3.9	3.9	8.4	3.9
83	PN	PN Emergency and Mobile Satellite Communication Systems Replacement	80130	Sustaining	Replace the obsolescent Emergency and Mobile Satellite Communication systems required for on- and off-site communications in the event of emergencies.	Feb-16	Mar-21	9.1	0.0	0.0	3.8	0.0	0.0	0.0	0.0	0.0
84	PN	PN Stator Cooling Water Alkalization and Make-up Deoxygenation	83061	Sustaining	Install Alkalization and Makeup Water Deoxygenation for the Stator Cooling Water system, to reduce copper oxide fouling of copper conductors.	Dec-16	Feb-24	12.6	0.0	2.7	1.3	0.0	0.0	0.0	0.0	0.0
85	IRI	PN SLAR (Spacer Location And Reposition) System Sustainability	83564	Sustaining	Upgrade obsolete components of the Spacer Location and Reposition system, by procuring a new control centre and transformer cart with cables, upgrading the existing control centre, and replacing associated computers.	Jan-19	Apr-22	6.1	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
86	IRI	PN ANDE (Advanced Non-Destructive Examination) Reliability Improvements	83565	Sustaining	Improve the reliability of the Advanced Non-Destructive Examination system used to inspect fuel channels in Pickering Units 5 - 8 to minimize outage delays.	Dec-17	Jan-22	6.7	1.4	0.0	5.2	1.4	0.0	0.0	0.0	0.0
87	IRI	PN Circumferential Wet Scrape Tool (CWEST) Enhancements	84140	Sustaining	Implement Circumferential Wet Scrape Tool (CWEST) enhancements, to address high priority areas for improvement and address CWEST Project #66600 open issues.	Nov-19	Dec-22	18.6	2.4	4.2	10.1	2.4	0.0	0.0	0.0	0.0
88	IRI	IRI Steam Generator Manipulator & Automated Tube Plug	84888	Sustaining	Procure manipulators and automated tube plugging equipment, to address all obsolescence issues, reduce outage delays, improve productivity and allow for future equipment advancements.	Mar-20	May-20	8.2	3.6	1.6	1.2	3.5	0.1	0.0	0.0	0.0
89	DN	DN Tritium Removal Facility Cold Box Vacuum System Obsolescence	80020	Sustaining	Address poor reliability and obsolescence of the TRF Cold Box Vacuum System that maintains high vacuum conditions for insulation and leak detection around the Low and High Tritium Distillation and Cryogenic Refrigeration systems.	Jan-16	Dec-22	9.6	9.1	0.0	0.0	8.7	0.4	0.0	0.0	0.0
90	DN	DN Condensate Extraction Pump Pump Motor Spare	80117	Sustaining	Acquire a capital spare motor for the Condensate Extraction Pumps.	Jan-15	Dec-18	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
91	IRI	DN Feeder and Fuel Channel Baseline Inspections	83051	Sustaining	Develop inspection capability, via procurement and assembly of inspection tooling and material handling equipment, to perform baseline inspections of feeders and fuel channels prior to the restart of refurbished Darlington units.	Aug-16	Oct-18	6.7	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
92		**Subtotal**						307.3	128.5	12.0	42.4	40.6	38.5	25.0	20.0	4.3
93		**Total**						943.2	176.2	33.3	87.8	54.6	60.0	32.0	23.9	5.5
		DIVISION TOTALS:														
94		**Darlington**							168.7	14.7	58.6	47.3	59.9	32.0	23.9	5.5
95		**Pickering**							0.0	11.8	12.6	0.0	0.0	0.0	0.0	0.0
96		**Operations and Project Support**							7.5	6.8	16.5	7.4	0.1	0.0	0.0	0.0
97		**Total**							176.2	33.3	87.8	54.6	60.0	32.0	23.9	5.5

Notes:
1 Projects with expenditures during IR term OR In-Service Amounts in Bridge or IR term, AND Completed/Deferred Projects at the time of preparing the Amended 2020-2026 Business Plan (from EB-2016-0152 or subsequent).
2 Total Project Cost reflects BCS amounts at the time of preparing the Amended 2020-2026 Business Plan, with the exception of Completed/Deferred/Cancelled Projects (for which actual costs are shown). BCS amounts reflect point estimates or, if range estimate or no estimate is provided in lieu of a point estimate, the current estimate of total project cost
3 Final In-Service Date means either the current forecast of the final date for in-service and close out of project, or the historical final project in-service date (but not the final project close out date which may not have yet occurred).

Numbers may not add due to rounding.

Table 3
Capital Project Listing - Nuclear Operations Facility Projects
Projects < $5M Total Project Cost[1]

Line No.	Sponsoring Division	Number of Projects	Total Project Cost ($M)	Average Cost of All Projects ($M)	In-Service IR Term ($M)	In-Service 2020 ($M)	In-Service 2021 ($M)	In-Service 2022 ($M)	In-Service 2023 ($M)	In-Service 2024 ($M)	In-Service 2025 ($M)	In-Service 2026 ($M)
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
1	**Darlington**	45	92.4	2.1	16.1	5.9	11.7	6.3	6.9	2.9	0.0	0.0
2	**Pickering**	64	128.3	2.0	0.0	5.9	8.2	0.0	0	0.0	0.0	0.0
3	**Operations and Project Support**	8	25.0	3.1	0.0	0.1	3.3	0.0	0	0.0	0.0	0.0
5	**Total**	117	245.6	2.1	16.1	11.9	23.2	6.3	6.9	2.9	0.0	0.0

Notes:

1 Projects with expenditures during IR term OR In-Service Amounts in Bridge or IR term, AND Completed/Deferred Projects at the time of preparing the Amended 2020-2026 Business Plan (from EB-2016-0152 or subsequent).

2 Operations and Project Support with capital projects includes Engineering, Inspection and Maintenance Services, and Security & Emergency Services.

Numbers may not add due to rounding.

Table 4a

Comparison of In-Service Capital Additions - Nuclear Operations ($M)

Line No.	Business Unit	2016 Budget	(c)-(a) Change	2016 Actual	(g)-(c) Change	2017 OEB Approved[1]	(g)-(e) Change	2017 Actual	(k)-(g) Change	2018 OEB Approved[1]	(k)-(i) Change	2018 Actual
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
1	**Darlington NGS**	325.9	(105.6)	220.3	(16.3)	226.1	(22.1)	204.1	81.8	216.4	69.5	285.8
2	**Pickering NGS**	146.0	(98.0)	47.9	132.4	172.8	7.5	180.3	(113.9)	47.5	18.9	66.4
3	**Operations and Project Support[2]**	36.0	(34.2)	1.8	40.8	49.2	(6.6)	42.6	(26.2)	45.9	(29.5)	16.4
4	**Subtotal**	507.9	(237.8)	270.1	156.9	448.2	(21.2)	427.0	(58.4)	309.8	58.8	368.6
5	**Supplemental In-Service Forecast[3]**	(41.8)	41.8	0.0	0.0	(1.6)	1.6	0.0	0.0	24.9	(24.9)	0.0
6	**Total Portfolio In-Service Forecast**	466.0	(195.9)	270.1	156.9	446.6	(19.6)	427.0	(58.4)	334.7	33.9	368.6
7	**Darlington New Fuel**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	**Darlington Water Treatment Plant Lease**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	**Darlington Spacer Retrieval [4]**	0.0	0.0	0.0	5.8	6.4	(0.6)	5.8	(5.8)	0.0	0.0	0.0
10	**Pickering Extended Operations**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	**Minor Fixed Assets**	31.0	(14.7)	16.3	15.4	26.0	5.6	31.6	(9.9)	20.0	1.7	21.7
12	**In-Service Capital Additions before Disallowance**	497.0	(210.7)	286.4	178.0	479.0	(14.6)	464.4	(74.1)	354.7	35.6	390.3
13	**OEB Disallowance**					(47.9)				(35.5)		
14	**Total In-Service Capital Additions**	497.0	(210.7)	286.4	178.0	431.1	33.3	464.4	(74.1)	319.2	71.1	390.3

Line No.	Business Unit	2018 Actual	(e)-(a) Change	2019 OEB Approved[1]	(e)-(c) Change	2019 Actual	(i)-(e) Change	2020 OEB Approved[1]	(i)-(g) Change	2020 Budget	(k)-(g) Change	2021 Budget
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
15	**Darlington NGS**	285.8	(25.3)	295.7	(35.2)	260.5	(84.4)	101.3	74.9	176.1	63.4	239.5
16	**Pickering NGS**	66.4	(29.6)	9.7	27.0	36.8	(1.8)	29.7	5.2	34.9	(14.1)	20.9
17	**Operations and Project Support[2]**	16.4	(11.9)	44.3	(39.8)	4.5	16.6	0.0	21.1	21.1	44.3	65.4
18	**Subtotal**	368.6	(66.8)	349.8	(48.0)	301.8	(69.6)	131.0	101.1	232.1	93.6	325.8
19	**Supplemental In-Service Forecast[3]**	0.0	0.0	16.6	(16.6)	0.0	(20.4)	78.8	(99.2)	(20.4)	(2.7)	(23.1)
20	**Total Portfolio In-Service Forecast**	368.6	(66.8)	366.3	(64.5)	301.8	(90.0)	209.8	1.9	211.7	90.9	302.7
21	**Darlington New Fuel**	0.0	0.0	0.0	0.0	0.0	17.1	15.3	1.7	17.1	(17.1)	0.0
22	**Darlington Water Treatment Plant Lease**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
23	**Darlington Spacer Retrieval[4]**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	**Pickering Extended Operations**	0.0	0.8	0.0	0.8	0.8	30.7	0.0	31.5	31.5	(26.4)	5.1
25	**Minor Fixed Assets**	21.7	1.8	19.1	4.5	23.5	(1.7)	19.5	2.4	21.9	2.2	24.1
26	**Total In-Service Capital Additions**	390.3	(64.2)	385.4	(59.3)	326.1	(43.9)	244.7	37.6	282.2	49.6	331.8
27	**OEB Disallowance**			(38.5)				(24.5)				
28	**Total In-Service Capital Additions**	390.3	(64.2)	346.9	(20.8)	326.107	(43.9)	220.2	62.0	282.2	49.6	331.8

Notes:

1 In-service additions per EB-2016-0152, Ex. J21.1, Attachment 2, Table 2. Amounts in this schedule do not reflect OEB-ordered reductions for: Auxiliary Heating System in-service amount (EB-2016-0152 Decision and Order, p. 21); Operations Support Building in-service amount (EB-2016-0152 Decision and Order, p. 22). These reductions are reflected in total nuclear rate base amounts in Ex. B3-2-1, Table 1. The 2017-2020 sub-components within the total portfolio in service forecast has also been adjusted for reclassification of projects from Darlington to Operations and Projects Support with no change to total amount.

2 Includes Engineering, Inspection and Reactor Innovation, and Security & Emergency Services.

3 Supplemental forecast to reconcile BCS in-service estimates to final business plan (see Ex. D2-1-3, Section 4.0).

4 Project #82949 DN X-750 Spacer Retrieval CMFA. OEB Approved amounts for Darlington Spacer Retreival per EB-2016-0152, Schedule 1, Staff-024, which were reflected in EB-2016-0152 Ex. J21.1, Attachment 2, Table 1.

Numbers may not add due to rounding.

Table 4b

Comparison of In-Service Capital Additions - Nuclear Operations ($M)

Line No.	Business Unit	2021 OEB Approved[1]	(c)-(a) Change	2021 Budget	(e)-(c) Change	2022 Plan	(e)-(c) Change	2023 Plan	(g)-(e) Change	2024 Plan	(i)-(g) Change	2025 Plan
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
1	**Darlington NGS**	62.1	177.5	239.5	170.2	409.7	(92.2)	317.6	(26.0)	291.6	82.7	374.3
2	**Pickering NGS**	0.0	20.9	20.9	(20.9)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3	**Operations and Project Support[2]**	0.0	65.4	65.4	(52.0)	13.4	80.4	93.8	(93.8)	0.0	29.5	29.5
4	**Subtotal**	62.1	263.7	325.8	97.4	423.1	(11.8)	411.3	(119.7)	291.6	112.3	403.9
5	**Supplemental In-Service Forecast[3]**	100.2	(123.4)	(23.1)	14.6	(8.5)	37.7	29.2	(16.1)	13.1	24.8	37.9
6	**Total Portfolio In-Service Forecast**	162.3	140.4	302.7	112.0	414.7	25.9	440.5	(135.8)	304.7	137.1	441.8
7	**Darlington New Fuel**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.5	16.5	0.4	16.9
8	**Darlington Water Treatment Plant Lease**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	138.6	138.6	(138.6)	0.0
9	**Darlington Spacer Retrieval[4]**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10	**Pickering Extended Operations**	0.0	5.1	5.1	(5.1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11	**Minor Fixed Assets**	19.3	4.7	24.1	(4.4)	19.6	1.4	21.0	8.2	29.2	(10.6)	18.7
12	**Total In-Service Capital Additions**	181.6	150.2	331.8	102.5	434.3	27.3	461.6	27.4	489.0	(11.7)	477.3
13	**OEB Disallowance**	(18.2)										
14	**Total In-Service Capital Additions**	163.5	168.3	331.8	102.5	434.3	27.3	461.6	27.4	489.0	(11.7)	477.3

Line No.	Business Unit	2025 Plan	(c)-(a) Change	2026 Plan
		(a)	(b)	(c)
15	**Darlington NGS**	374.3	(205.4)	168.9
16	**Pickering NGS**	0.0	0.0	0.0
17	**Operations and Project Support[2]**	29.5	(29.5)	0.0
18	**Subtotal**	403.9	(234.9)	168.9
19	**Supplemental In-Service Forecast[3]**	37.9	112.0	149.9
20	**Total Portfolio In-Service Forecast**	441.8	(123.0)	318.8
21	**Darlington New Fuel**	16.9	1.2	18.1
22	**Darlington Water Treatment Plant Lease**	0.0	0.0	0.0
23	**Darlington Spacer Retrieval[4]**	0.0	0.0	0.0
24	**Pickering Extended Operations**	0.0	0.0	0.0
25	**Minor Fixed Assets**	18.7	(7.3)	11.4
26	**Total In-Service Capital Additions**	477.3	(129.0)	348.3

Notes:

1 In-service additions per EB-2016-0152, Ex. J21.1, Attachment 2, Table 2. Amounts in this schedule do not reflect OEB-ordered reductions for: Auxiliary Heating System in-service amount (EB-2016-0152 Decision and Order, p. 21); Operations Support Building in-service amount (EB-2016-0152 Decision and Order, p. 22). These reductions are reflected in total nuclear rate base amounts in Ex. B3-2-1, Table 1. The 2017-2020 sub-components within the total portfolio in service forecast has also been adjusted for reclassification of projects from Darlington to Operations and Projects Support with no change to total amount.

2 Includes Engineering, Inspection and Reactor Innovation, and Security & Emergency Services.

3 Supplemental forecast to reconcile BCS in-service estimates to final business plan (see Ex. D2-1-3, Section 4.0).

4 Project #82949 DN X-750 Spacer Retrieval CMFA. OEB Approved amounts for Darlington Spacer Retreival per EB-2016-0152, Schedule 1, Staff-024, which were reflected in EB-2016-0152 Ex. J21.1, Attachment 2, Table 1.

Table 5a
Capital Project Listing - Nuclear Operations
Portfolio Projects (Unallocated)[1]

Line No.	Project Name	Category	Potential Start Date
	(a)	(b)	(c)
	Darlington NGS - Projects With Potential Cost < $20M		
1	Tritium Removal Facility / Heavy Water Management Interim Lfie Cycle Plan Implementation	Sustaining	2021
2	Main Control Room HVAC Backup Instrument Air Compressor/Dryer Replacement	Sustaining	2021
3	Low Pressure Service Water Pump Capital Spares	Sustaining	2021
4	Room S-412 Heating / Ventilation / Air Conditioning Overhaul / Replacement	Sustaining	2021
5	Tritium Removal Facility Cryogenic Refrigeration System Hydrogen Compressor Capital Spare	Sustaining	2021
6	Emergency Service Water Pump Capital Spare	Sustaining	2021
7	Steam Generators Waterlancing Optimization	Sustaining	2021
8	Glycol Chiller Temperature Control Valve Replacement	Sustaining	2022
9	Powerhouse Elevator Replacement (Passenger and Freight)	Sustaining	2022
10	D2O Weigh Tank Instrumentation Replacement	Sustaining	2022
11	Low Pressure Service Water Cooling Coil Replacement (Miscellaneous Air Conditioning)	Sustaining	2022
12	Emergency Service Water Strainer Replacement	Sustaining	2022
13	Water Based Air Conditioning Cooling Coils Replacement	Sustaining	2022
14	Condenser Circulating Water Pump Capital Spare	Sustaining	2022
15	Main Condensate Extraction Pump Capital Spares	Sustaining	2022
16	Environmentally Qualified Cables Replacement	Sustaining	2022
17	Fuel Handling Reactor Area Bridge and Carriage Mobile Platform Installation	Sustaining	2022
18	Frazil Ice Gate Replacement	Sustaining	2023
19	Lake Current Monitoring System Replacement	Sustaining	2023
20	End Shield Cooling Expansion Tank Replacement	Sustaining	2023
21	Active Liquid Waste Tank Liner Replacement	Sustaining	2023
22	Fire Detection Panel Upgrade	Sustaining	2023
23	Inactive Drainage Sump Pump Replacement	Sustaining	2023
24	Emergency Service Water Travelling Screen, Motor and Bubbler Replacement	Sustaining	2023
25	Switchyard Coupling Capacitor and Surge Arrestor Replacement	Sustaining	2023
26	Post-Accident Water Cooling System Heat Exchanger Plate Pack Capital Spare	Sustaining	2024
27	Negative Pressure Containment Upper Vacuum Chamber Pump Replacement	Sustaining	2024
28	Unit 0 Class II 120/208VAC Motor Control Centre Replacement	Sustaining	2024
29	Shutdown System 2 Ion Chamber Detector Replacement	Sustaining	2024
30	Moisture Separator Reheater Tube Bundle Capital Spares	Sustaining	2024
31	Dousing Water Heater Replacement (VBO)	Sustaining	2024
32	Irradiated Fuel Bay Heat Exchanger Plate Pack Capital Spares	Sustaining	2025
33	End Shield Cooling Heat Exchanger Plate Packs Replacement	Sustaining	2025
34	Condenser Hotwell Sampling Pumps and Analyzer Replacement	Sustaining	2025
	Darlington NGS - Projects With Potential Cost ≥ $20M		
35	Condenser Circulating Water, Emergency Service Water & Low Pressure Service Water Expansion Joints Replacement	Sustaining	2021
36	Vault and Containment Vapour Recovery Systems Component Replacement	Sustaining	2021
37	Tritium Removal Facility Life Extension	Sustaining	2021
38	Tritium Removal Facility Cryogenic Refrirgeration System Hydrogen Compressor Upgrade	Sustaining	2021
39	Public Address System Upgrade	Sustaining	2022
40	Breathing, Instrument and Service Air Compressor Replacement	Sustaining	2022
41	Shutdown System 1 Rod Drive Capital Spares	Sustaining	2023
42	Standby Generator (SG) Fuel Oil Storage Tank Bottom Replacement	Sustaining	2024
43	Turbine Lubricating Oil Cooler Replacement	Sustaining	2024
44	Powerhouse Cranes Refurbishment	Sustaining	2025
45	Ventilation & Air Conditioning Fans Replacement	Sustaining	2025
	Table continues on Ex. D2-1-3 Table 5b		

Notes:
1 Projects with potential expenditures during IR term.

Table 5b
Capital Project Listing - Nuclear Operations
Portfolio Projects (Unallocated)[1]

Line No.	Project Name	Category	Potential Start Date
	(a)	(b)	(c)
	Inspection & Maintenance Services - Projects With Potential Cost < $20M		
46	Steam Generator Eddy Current Testing Auto-Analysis Software	Sustaining	2021
47	Advanced Non-Destructive Examination MK1 Replication Tool	Sustaining	2021
48	Fuel Channel Auto-Analysis Software	Sustaining	2021
49	Feeder Cabinet Visual Inspect Tool	Sustaining	2022
50	Steam Generator and Heat Exchanger Ultrasonic Tube Inspection System Upgrade	Sustaining	2022
51	Laser-Induced Breakdown Spectroscopy for Hydrogen Characterization	Sustaining	2022
52	Advanced Non-Destructive Examination MK3 Inspection Tool	Sustaining	2023
	Inspection & Maintenance Services - Projects With Potential Cost ≥ $20M		
53	PRECISE-WET (PREcise CIrcumferential Sampling Equipment - WET) Machine Delivered Scrape	Sustaining	2023

Notes:
1 Projects with potential expenditures during IR term

Table 6a
Capital Projects - Nuclear Operations
Listing of Business Case Summaries Filed

Line No.	Facility	Business Case Summary (BCS) Title	Project Number	BCS Approval Date	Project Stage	BCS Status	BCS Status in EB-2016-0152
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		ONGOING PROJECTS FROM EB-2016-0152					
1	DN	Darlington Class II Uninterruptlble Power Supply Replacement	31412	Nov-17	Execution	Partial	Execution Partial
2	DN	Fuel Handling Inverter Replacement	31426	Aug-18	Execution	Full	
3	DN	Darlington Station Lighting Retrofit	31516	Mar-19	Execution	Full	
4	DN	Restore ESW Margins	31518	Sep-18	Execution	Full	Definition Full
5	DN	DN Roof Replacement Project	31524	Mar-19	Definition	Superseding	Deferred Partial
6	DN	Powerhouse Water ACU Replacements	31532	May-19	Execution	Full	Definition Partial
7	DN	Darlington Water Treatment Plant Interconnections	31535	Jun-19	Definition	Superseding	Definition Full
8	DN	DN Install Multi-Gas Analyzers on Transformers MOT/SST/UST	31542	Jun-18	Close-out	Over-Variance	Execution Full
9	DN	DN Radiation Detection Equipment Obsolescence (Stack Monitoring & PARMS)	31544	Nov-19	Definition	Superseding	Definition Partial
10	DN	Darlington Shutdown Cooling Heat Exchanger Replacement	31710	Feb-18	Close-out	Full	Execution Partial
11	DN	DN NOP & IC Amplifier Replacement (RRS, SDS1 & SDS2)	31716	May-18	Execution	Partial	Definition Partial
12	DN	Replacement of EPS Uninterruptible Power Suppliers	33258	May-17	Execution	Full	
13	DN	DN Secondary Control Area Air Conditioning Unit Replacement	33621	Oct-18	Execution	Superseding	Execution Partial
14	DN	DNGD: Chiller Replacement to Reduce CFC Emissions	33631	Sep-10	Execution	Full	Execution Full
15	DN	DN Vibration Monitoring System Replacement for Major Pump-sets	33819	Jul-20	Execution	Superseding	Execution Partial
16	DN	DN SG Controls Replacement	33973	Oct-17	Execution	Over-Variance	Execution Partial
17	DN	Darlington DCC Replacerrent	33977	Oct-17	Execution	Over-Variance	Execution Superceding
18	DN	DN Auxiliary Heating System Facility	34000	May-16	Close-out	Over-Variance	Execution Partial
19	DN	Zebra Mussel Mitigation Improvements	38948	Mar-18	Close-out	Superseding	Execution Partial
20	DN	DN PHT Pump Motor Replacement, Overhaul and Capital Spares [1]	73566 80144 36001	Jul-17	Execution	Full	Execution Partial
21	DN	OH180 Aging Management Hardware Installation	80022	Sep-19	Execution	Partial	Definition Full
22	DN	DN Steam Generator Level Control Valves Replacement	80023	Nov-19	Definition	Superseding	
23	DN	DN R-22 Refrigerant ACU Replacement	80036	Jul-19	Definition	Superseding	
24	DN	DN Standby Generators Protective Relay Replacement	80063	Jun-20	Definition	Full	
25	DN	Darlington Digital Control, Common Process and Sequence of Events Monitoring Computer Aging Management	80078	Nov-19	Definition	Partial	Definition Partial
26	PN	PB-EPG and MOP relay replacement.	40691	Dec-17	Close-out	Full	

1 Projects 73566, 36001 and 80144 are combined in a single Business Case Summary

Table 6b
Capital Projects - Nuclear Operations
Listing of Business Case Summaries Filed

Line No.	Facility	Business Case Summary (BCS) Title	Project Number	BCS Approval Date	Project Stage	BCS Status	BCS Status in EB-2016-0152
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		COMPLETED/DEFERRED/CANCELLED FROM EB-2016-0152					
27	DN	Operations Support Building Refurbishment	25619	Aug-15	Complete	Over-Variance	Execution Full
28	DN	Fukushima Phase 1 Beyond Design Basis Event (BDBE) Emergency Mitigation Equipment (EME) [1]	31508 49158 49299	Aug-16	Complete	Full	Execution Partial
29	DN	DN - CCW and LPSW Travelling Screen Replacement	31552	Dec-16	Complete	Full	Execution Partial
30	DN	Darlington Maintenance and Computer Development Facility	31717	Mar-12	Complete	Full	Execution Full
31	DN	Fukushima Phase II Beyond Design, Basis Event Emergency Mitigation Equipment [2]	32202 41027	Aug-16	Complete	Full	Execution Partial
32	DN	DN SDS Computers Aging Management	33955	Jul-16	Complete	Over-Variance	Execution Superceding
33	DN	DN Purchase of Primary Heat Transport Pump Motor Capital Spares [3]	36001	Jul-17	Execution	Full	Execution Partial
34	DN	Holt Road Interchange Upgrade	73706	Nov-13	Complete	Full	Execution Full
35	DN	DN Generator Stator Core Capital Spare	80111	Sep-15	Complete	Full	Execution Full
36	PN	U58 Fuel Handling Reliability Improvement Project	40976	May-16	Close-out	Full	Execution Partial
37	PN	PA Fuel Channel Reconfiguration & East & West Shift Tooling	41023	Sep-14	Complete	Superseding	Execution Superceding
38	PN	Pickering A Fuel Handling SPV Reliability Improvement	46634	May-12	Complete	Full	Execution Full
39	IRI	Machine Delivered Scrape Project	66600	Oct-17	Complete	Over-Variance	Execution Partial
		PROJECTS NOT IN EB-2016-0152					
40	DN	DN / DNR1 / DNR4 Main Power Output Protection System Replacement	80122	Nov-19	Definition	Superseding	N/A
41	DN	DN Group II Pressure Transmitter Replacement	80123	May-20	Definition	Full	N/A
42	DN	DN Obsolete Controller Replacement	80124	Oct-18	Execution	Partial	N/A
43	DN	DN Emergency Power Generator 1 and 2 Replacement	80126	May-18	Execution	Partial	N/A
44	DN	Darlington Nuclear Fuel Handling Control Computer Input/Output Subsystem (Multiplexer) & Inter-Processor Communication Replacement	80148	Nov-19	Definition	Partial	N/A
45	DN	DN FRF Pump Improvement	80150	May-18	Definition	Full	N/A
46	DN	Class 1 Rectifier Replacement	82883	May-18	Development	Full	N/A
47	DN	Transformer Control Cabinet Wiring System Replacement	82890	Jan-19	Deferred	Full	N/A
48	DN	DN FM Head Major Component Replacement	82947	Mar-20	Definition	Partial	N/A
49	DN	DN Copper Piping Replacement	83049	Aug-19	Execution	Superseding	N/A

1 Projects 31508, 49158 and 49299 are combined in a single Business Case
2 Projects 41027 and 32202 are combined in a single Business Case Summary.
3 Projects 73566, 36001 and 80144 are combined in a single Business Case Summary

Table 6c
Capital Projects - Nuclear Operations
Listing of Business Case Summaries Filed

Line No.	Facility	Business Case Summary (BCS) Title	Project Number	BCS Approval Date	Project Stage	BCS Status	BCS Status in EB-2016-0152
	(a)	(b)	(c)	(d)	(e)	(f)	(g)
		PROJECTS NOT IN EB-2016-0152 (continued)					
50	DN	FH Power & Signal Cable Replacement	83052	Apr-19	Definition	Full	N/A
51	DN	DN Shutdown Cooling Heat Exchanger PULSW Piping Replacement [1]	83053	Jul-18	Execution	Partial	N/A
52	DN	Darlington Phase 2 Station Battery Replacement	83076	Jul-19	Execution	Partial	N/A
53	DN	Darlington Main Output Transformer and Unit Service Transformer Replacement	83296	Apr-19	Execution	Partial	N/A
54	DN	DN Large Moderator Temperature Control Valve Replacement	83297	Nov-19	Definition	Full	N/A
55	DN	DN Secondary Systems High Priority Control Valve Replacements	83298	Oct-19	Definition	Full	N/A
56	DN	DN- Condenser Steam Discharge Valves Control System Upgrade	83299	Feb-20	Definition	Full	N/A
57	DN	4kV Motors Refurbishment and Replacement	83480	Dec-19	Definition	Full	N/A
58	DN	DN Isolated Phase Bus Refurbishment	83484	Jul-20	Development	Full	N/A
59	DN	DN Turbine Hall Crane Controls Upgrade	83556	Jul-20	Execution	Over-Variance	N/A
60	DN	FH Service Area Bridge F5 Ball Screw Assembly Replacement, and DN Fuel Handling SAB Ball Screw And Jack Assembly Capital Spares	83558	Dec-19	Definition	Full	N/A
61	DN	IFB Permanent Fuel Inspection Equipment in East & West FFAA	83559	Apr-20	Execution	Partial	N/A
62	DN	U2 Turbine/Generator Electronic Controls and Generator Auxiliaries Upgrade	83664	Dec-19	Definition	Full	N/A
63	DN	DN Fuel Handling Replacement of Fuelling Machine Calibration Facility	83916	Feb-20	Development	Full	N/A
64	DN	DN Air Operated Valve (AOV) Replacements	84009	Mar-20	Development	Full	N/A
65	DN	Darlington Primary Heat Transport Liquid Relief Valves Modification	84235	Jun-19	Execution	Partial	N/A
66	DN	DN Motor Operated Valve (MOV) Replacements	84551	Mar-20	Development	Full	N/A
67	DN	DN PHT Pump Rotor Inspect / Replace (RECL)	84799	May-20	Execution	Partial	N/A
68	DN	DN Revenue Metering Transformer Replacement (Cap)	84939	Apr-20	Development	Full	N/A
69	PN	Pickering Buried Boiler Blowdown Pipe Replacement	83072	Jul-19	Execution	Full	N/A
70	PN	PA LP Feedwater Heat Exchangers Replacement	83088	Mar-18	Close-out	Full	N/A
71	PN	Pickering High Pressure Turbine Spares	83668	Nov-17	Close-out	Full	N/A
72	IRI	Rapid Delivery Machine (RDM)	83039	Dec-19	Definition	Superseding	N/A
73	ENG	Fleet Monitoring Initiative (Monitoring & Diagnostic Centre)	83828	Mar-20	Definition	Partial	N/A

Notes
1 Filed BCS is the initial approved #83053 - DN Powerhouse Upper Level Service Water Piping Replacement
2 Filed BCS is the initial approved #38933, #83136, #83137, #83138, #83139,#83232, Darlington Primary Heat Transport Liquid Relief Valves Modifications

Table 7a
Capital Projects - Nuclear Operations
Status of Projects > $5M with 2017 to 2021 In-Service Dates in EB-2016-0152

Line No.	Project Number	Project Name	In-Service Date at Time of EB-2016-0152 Application	Project Stage at Time of EB-2016-0152 Application	Current Project Status	
					Project Status	Projected/Actual In-Service Date
	(a)	(b)	(c)	(d)	(e)	(f)
1	31403	DN Active Liquid Waste System Upgrade	Dec-17	Execution	Execution	Dec-22
2	31412	DN Class II Uninterruptible Power Supply Replacement	Jun-25	Execution	Execution	Mar-25
3	31420	DN Dryer PLC Replacement	Mar-22	Definition	Execution	Aug-24
4	31422	DN Pressurizer Heaters & Controllers Replacement Project	Dec-19	Execution	Execution	Dec-21
5	31426	DN Fuel Handling Inverter Replacement	Dec-18	Execution	Execution	Apr-21
6	31432	DN Containment Button-up Activity Monitors Replacement	Oct-19	Execution	Execution	Mar-21
7	31508	DN Fukushima Phase 1 Beyond Design Basis Event Emergency Mitigation Equipment	Sep-17	Execution	Complete	Apr-18
8	31518	DN Restore Emergency Service Water and Firewater Margins	Sep-16	Definition	Close-out	Aug-19
9	31520	DN Replacement of Obsolete Online Chemistry Analysers	Nov-17	Execution	Execution	Jan-21
10	31524	DN Station Roofs Replacement	Deferred	Deferred	Definition	Nov-27
11	31532	DN Powerhouse Water ACUs Replacement	Dec-19	Execution	Execution	Jan-23
12	31535	DN Water Treatment Plant Replacement	Deferred	Definition	Definition	Sep-24
13	31536	DN Turbine-Generator Lube Oil Purifier Replacement	Apr-17	Execution	Close-out	Apr-18
14	31542	DN Transformer Multi-Gas Analyzer Installation	Mar-18	Execution	Close-out	Dec-20
15	31544	DN Radiation Detection Equipment Obsolescence	Dec-21	Definition	Definition	Sep-23
16	31548	DN Feedwater Chemistry Control Improvements	Nov-22	Execution	Complete	Feb-20
17	31552	DN Condenser Circulating Water and Low Pressure Service Water Travelling Screens Replacement	Jun-18	Execution	Complete	Nov-18
18	31701	DN TRF CRS TOSS/Turbine Replacement	Deferred	Execution	Execution	Jun-25
19	31706	DN Vapour Recovery Button-Up Valve Replacements	Jun-18	Execution	Definition	Feb-24
20	31710	DN Shutdown Cooling Heat Exchanger Replacement	May-19	Execution	Execution	Dec-21
21	31716	DN Neutron Over-Power & Ion Chamber Amplifier Replacement (Reactor Regulating System, Shutdown System 1 & Shutdown System 2)	Jul-22	Definition	Execution	Oct-26
22	32202	DN Fukushima Phase 2 Beyond Design Basis Event Emergency Mitigation Equipment	Deferred	Execution	Complete	May-18
23	33258	DN Replacement of EPS Uninterruptible Power Supply	Nov-17	Execution	Execution	Feb-22
24	33509	DN Replacement of Obsolete Computer Components	Jul-16	Execution	Complete	Jun-19
25	80022	DN OH180 Aging Management Hardware Installation	Dec-22	Definition	Execution	Jun-28
26	33621	DN ACU Replacement for Secondary Control Area (SCA)	Apr-17	Execution	Execution	Aug-25
27	33631	DN Chiller Replacement to Reduce CFC Emissions	Jan-13	Execution	Execution	Dec-17
28	33815	FH Computer Replacement	Deferred	Execution	Execution	Nov-21
29	33819	DN Major Pump-sets Vibration Monitoring System Upgrades	Jul-21	Execution	Execution	Nov-26
30	33973	DN SG Controls Replacement	May-17	Execution	Execution	Mar-21
31	34000	DN Auxiliary Heating System	Apr-16	Execution	Close-out	Jun-18
32	33977	DN DCC Replacement / Refurbishment / Upgrades	Dec-18	Execution	Execution	Dec-21
33	36004	DN EPG Power Turbine Capital Spare	Mar-17	Execution	Cancelled	Jan-00
34	38466	DN CSA Sewage Line and Sump Emergency Connections	Dec-17	Execution	Execution	Dec-28
35	38942	TRF Tritium Emissions Reduction Project	Jun-17	Execution	Cancelled	Apr-16
36	38948	DN Zebra Mussel Mitigation Improvements	Jul-16	Execution	Close-out	Dec-21
37	40691	PB EPG and MOP Protective Relay Replacement	May-19	Execution	Close-out	Oct-19
38	40972	PA SG Reliability Upgrades	Nov-17	Execution	Execution	Dec-21

Table 7b
Capital Projects - Nuclear Operations
Status of Projects > $5M with 2017 to 2021 In-Service Dates in EB-2016-0152

Line No.	Project Number	Project Name	In-Service Date at Time of EB-2016-0152 Application	Project Stage at Time of EB-2016-0152 Application	Current Project Status	
					Project Status	Projected/Actual In-Service Date
	(a)	(b)	(c)	(d)	(e)	(f)
39	40976	PB Fuel Handling Reliability Modifications	Jul-17	Execution	Close-out	Dec-18
40	40985	PN Replacement of Obsolete Online Chemistry Analysers	Jun-17	Execution	Execution	Aug-19
41	41027	PN Fukushima Phase 2 Beyond Design Basis Event Emergency Mitigation Equipment	Jun-17	Execution	Complete	Nov-17
42	41030	Pickering PDM Program Review Project (Capital)	Dec-18	Execution	Cancelled	Jan-00
43	41043	PN Emergency Power Generator Engine Replacement	Jun-17	Execution	Complete	Dec-16
44	41044	PA SG Protective Relay Upgrade	May-17	Execution	Execution	Oct-19
45	46634	Pickering A Fuel Handling Single Point of Vulnerability Equipment Reliability Improvement	Mar-16	Execution	Complete	Dec-18
46	49116	PN PB SG/EPG Fire Detection Upgrade and CO2 Suppression Removal	Jul-16	Execution	Complete	Apr-16
47	49132	Pickering A Fuel Handling Single Point of Vulnerability Equipment Reliability Improvement	Oct-16	Execution	Complete	Nov-16
48	49146	PN Fire Code Compliance for Relocatable Structures in Un-Zoned Area for Pickering Station	Jul-16	Execution	Complete	Dec-18
49	49154	PB Replacement of Obsolete Instrumentation and Control Equipment	Jun-18	Execution	Execution	Mar-21
50	49158 49299	PN Fukushima Phase 1 Beyond Design Basis Event Emergency Mitigation Equipment4,5	Aug-16	Execution	Complete	Apr-18
51	49298	PA Replacement of U1, U4 and IFB-A Stack Monitors	Dec-17	Execution	Complete	May-18
52	66594	IMS CIGAR Gap System and Drive Reliability	Jun-17	Execution	Complete	Sep-18
53	66600	PN Machine Delivered Scrape	May-17	Execution	Complete	May-21
54	73566 80144	DN Primary Heat Transport Pump Motor Replacement/Overhaul	Dec-22	Execution	Execution	May-21
55	80022	DN OH180 Aging Management Hardware Installation	Dec-22	Definition	Execution	Jun-28
56	80023	DN Large Steam Generator LCV Replacement	Oct-22	Execution	Definition	Jun-26
57	80036	DN R22 Refrigerant ACU Replacement	Oct-21	Execution	Definition	Jan-26
58	80069	PA Firewater Buried Ring Header Replacement (North Loop)	Dec-17	Execution	Complete	Jul-19
59	80070	DN Feeder Scanner Replacement (CMFA)	Mar-19	Execution	Execution	Aug-22
60	80078	DN Digital Control, Common Process and Sequence of Events Monitoring Computer Aging Management	Jun-25	Definition	Definition	Feb-28
61	80111	DN Generator Stator Core Spare	Jul-19	Execution	Complete	Jul-19
62	80151	DN FHA and FSSA Modifications	Jan-19	Execution	Execution	Sep-21
63	82816	DN Vault Cooling Coil Replacement	Sep-20	Execution	Close-out	Jul-19
64	82949	DN X-750 Spacer Retrieval CMFA	Nov-18	Execution	Complete	Nov-18