

EXHIBIT 2 – RATE BASE

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2.1 OVERVIEW

The following Exhibit contains both details and analysis of London Hydro's rate base for the years 2017 Actual, 2017 OEB Approved, 2018 Actual, 2019 Actual, 2020 Actual, 2021 Bridge Year, and 2022 Test Year. Rate base has been calculated in accordance with the OEB's Filing Requirements for Electricity Distribution Rate Applications – 2021 Edition for 2022 Rate Applications, issued on June 24, 2021.

London Hydro's 2022 Cost of Service Rate Application, like its 2017 Application, has been filed in accordance with Modified International Financial Reporting Standards ("MIFRS"). All schedules and number references in this Application are in accordance with MIFRS.

The net fixed assets include those distribution assets that are associated with the delivery of electricity to the inhabitants of the City of London. London Hydro's rate base calculation excludes any non-distribution assets, work-in-progress as well as inventory held for capital projects. Eligible distribution expenses used in the calculation of the working capital allowance ("WCA") include operations and maintenance, billing and collections, community relations, eligible donations, and administration expenses.

Table 2-1 below presents a summary of London Hydro's rate base for the 2017 OEB Approved Year, 2017-2020 Historical Years, 2021 Bridge Year, and 2022 Test Year. Rate base for the 2022 Test Year is calculated at \$383,463,940.

Note that the gross fixed assets and accumulated depreciation balances used in London Hydro's rate base calculation correspond directly to the Fixed Asset Continuity Schedules that can be found in Appendix 2-1, within this Exhibit.

Table 2-1 – Summary of Rate Base

SUMMARY OF RATE BASE									
	2017 Actual	2017 OEB Approved	2018 Actual	2019 Actual	2020 Actual	2021 Bridge	2022 Test	2017 OEB Approved to 2022 Test	CAGR
	\$	\$	\$	\$	\$	\$	\$	\$	%
Opening Balance, January 1	261,508,390	261,263,531	270,741,617	287,927,800	306,639,277	325,182,703	346,929,337	85,665,806	7.3%
Closing Balance, December 31	270,741,617	270,282,432	287,927,800	306,639,277	325,182,703	341,044,103	366,291,537	96,009,105	7.9%
Net Fixed Assets (Average)	266,125,004	265,772,981	279,334,709	297,283,539	315,910,990	333,113,403	356,610,437	90,837,455	7.6%
Allowance for Working Capital	30,837,420	33,795,804	29,685,018	30,613,940	35,559,851	38,054,264	26,853,504	(6,942,300)	-5.6%
Rate Base	296,962,424	299,568,785	309,019,727	327,897,479	351,470,841	371,167,667	383,463,940	83,895,155	6.4%
Annual Change		(2,606,361)	12,057,303	18,877,752	23,573,363	19,696,826	12,296,273		
Annual Change %		-0.9%	4.0%	6.1%	7.2%	5.6%	3.5%	28.0%	

Total rate base has increased by \$83,895,155 between the 2017 OEB Approved amounts and the 2022 Test Year, representing a total increase of 28.0% or a 6.4% compound annual growth rate (CAGR). (Note: The 2021 closing balance differs from the 2022 opening balance by \$5,885,234. This amount represents the net book value of the Nelson Transformer Station and JD Edwards projects, previously captured in an Account 1508 Advance Capital Module Account, and are budgeted to be brought into rate base on January 1, 2022). Details of this transfer are shown within the Fixed Asset Continuity Schedules section below (2.1.2), as well as in Table 2-8 below. More information about the transfer of these regulatory deferral accounts can be found in Exhibit 9, “Deferral and Variance Accounts”.

Details regarding the calculation of WCA can be found within Section 2.3 of this Exhibit.

1 **2.1.1 Rate Base Variance Analysis**

2 The following section outlines London Hydro's rate base and working capital allowance
3 calculations and explanations of year-over-year variances, from its 2017 Cost of Service
4 Application to the 2022 Test Year.

5 The variance between the 2017 OEB Approved amounts and the 2022 Test Year is mainly due
6 to an increase in the average net fixed assets of \$90,837,455, as a result of capital additions over
7 the 2017-2022 period. London Hydro has invested heavily in its distribution system since the last
8 Cost of Service application, including some significant one-time investments discussed further
9 below. The majority of London Hydro initiated investments are focused on System Renewal (to
10 maintain the existing level of system reliability by replacing assets at end-of-life and most at risk
11 of failure), and System Access (investments to accommodate new connections, growth, and
12 infrastructure relocations due to third party requests).

13 The increase in average net fixed assets was partly offset by a reduction in WCA of \$6,942,300,
14 due to a decrease in the Cost of Power from the 2017 OEB Approved year to the 2022 Test Year.

1 **2017 OEB Approved vs. 2017 Actuals**

2 **Table 2-2 – 2017 OEB Approved vs. 2017 Actuals – Rate Base**

RATE BASE VARIANCE ANALYSIS				
2017 OEB Approved vs 2017 Actuals				
	2017 Actual	2017 OEB Approved	Variance	Variance
	\$	\$	\$	%
Net Fixed Assets (Average)				
Gross Fixed Assets (Average)	458,259,208	457,850,699	408,509	0.1%
Accumulated Depreciation (Average)	192,134,204	192,077,717	56,487	0.0%
	266,125,004	265,772,981	352,022	0.1%
Allowance for Working Capital				
Controllable Expenses	37,699,259	37,480,541	218,718	0.6%
Cost of Power (COP)	373,466,345	413,130,174	(39,663,829)	-10.6%
Total Controllable Expenses & COP	411,165,604	450,610,715	(39,445,111)	-9.6%
WCA Rate	7.50%	7.50%	0.00%	
	30,837,420	33,795,804	(2,958,383)	-9.6%
Rate Base	296,962,424	299,568,785	(2,606,361)	-0.9%

3

4 In 2017, Actual rate base was \$2,606,361, or 0.9% lower than the 2017 OEB Approved amount.

5 The decrease was driven by a lower WCA due to lower than planned COP expenses. The

6 Ontario Fair Hydro Plan, effective July 1, 2017, reduced commodity costs via reduced RPP

7 prices, as well a reduction to Global Adjustment via the GA Modifier.

1 **2017 Actuals vs. 2018 Actuals**

2 **Table 2-3 – 2017 Actuals vs. 2018 Actuals – Rate Base**

RATE BASE VARIANCE ANALYSIS				
2017 Actuals vs 2018 Actuals				
	2017 Actual	2018 Actual	Variance	Variance
	\$	\$	\$	%
Net Fixed Assets (Average)				
Gross Fixed Assets (Average)	458,259,208	477,465,585	19,206,377	4.2%
Accumulated Depreciation (Average)	192,134,204	198,130,877	5,996,672	3.1%
	266,125,004	279,334,709	13,209,705	5.0%
Allowance for Working Capital				
Controllable Expenses	37,699,259	38,879,376	1,180,117	3.1%
Cost of Power (COP)	373,466,345	356,920,866	(16,545,479)	-4.4%
Total Controllable Expenses & COP	411,165,604	395,800,242	(15,365,362)	-3.7%
WCA Rate	7.50%	7.50%	-	
	30,837,420	29,685,018	(1,152,402)	-3.7%
Rate Base	296,962,424	309,019,727	12,057,303	4.1%

3

4 In 2018, Actual rate base was higher than 2017 Actual amounts by \$12,057,303, or 4.1%. The

5 increase was primarily driven by a \$13,209,705 increase to the average net fixed assets, most of

6 which was as a result of investments made in Distribution Plant assets. In 2018, London Hydro

7 began replacing aging civil structures along Dundas Street, in order to coincide with the City of

8 London's major rebuild of the same street. For more details on capital additions, see Section 2.2

9 of this Exhibit. The increase was partially offset by a reduction in WCA, due to a reduction in COP

10 expenses.

1 **2018 Actuals vs. 2019 Actuals**

2 **Table 2-4 – 2018 Actuals vs. 2019 Actuals – Rate Base**

RATE BASE VARIANCE ANALYSIS				
2018 Actuals vs 2019 Actuals				
	2018 Actual	2019 Actual	Variance	Variance
	\$	\$	\$	%
Net Fixed Assets (Average)				
Gross Fixed Assets (Average)	477,465,585	502,832,843	25,367,258	5.3%
Accumulated Depreciation (Average)	198,130,877	205,549,305	7,418,428	3.7%
	279,334,709	297,283,539	17,948,830	6.4%
Allowance for Working Capital				
Controllable Expenses	38,879,376	39,937,045	1,057,668	2.7%
Cost of Power (COP)	356,920,866	368,248,825	11,327,959	3.2%
Total Controllable Expenses & COP	395,800,242	408,185,870	12,385,628	3.1%
WCA Rate	7.50%	7.50%	-	
	29,685,018	30,613,940	928,922	3.1%
Rate Base	309,019,727	327,897,479	18,877,752	6.1%

3

4 In 2019, Actual rate base was higher than 2018 Actual amounts by \$18,877,752, or 6.1%. The

5 increase was primarily driven by a \$17,948,830 increase to the average net fixed assets, most of

6 which was as a result of investments made in Distribution Plant assets. Project spending related

7 to the replacement of aging civil structures along Dundas Street continued as Phase 2 of the

8 project commenced in 2019. For more details on capital additions, see Section 2.2 of this Exhibit.

9 WCA also increased from 2018 to 2019, the majority of which was due to an increase in COP

10 expenses.

1 **2019 Actuals vs. 2020 Actuals**

2 **Table 2-5 – 2019 Actuals vs. 2020 Actuals – Rate Base**

RATE BASE VARIANCE ANALYSIS				
2019 Actuals vs 2020 Actuals				
	2019 Actual	2020 Actual	Variance	Variance
	\$	\$	\$	%
Net Fixed Assets (Average)				
Gross Fixed Assets (Average)	502,832,843	530,135,018	27,302,175	5.4%
Accumulated Depreciation (Average)	205,549,305	214,224,028	8,674,724	4.2%
	297,283,539	315,910,990	18,627,451	6.3%
Allowance for Working Capital				
Controllable Expenses	39,937,045	40,495,943	558,899	1.4%
Cost of Power (COP)	368,248,825	433,635,408	65,386,583	17.8%
Total Controllable Expenses & COP	408,185,870	474,131,351	65,945,481	16.2%
WCA Rate	7.50%	7.50%	-	
	30,613,940	35,559,851	4,945,911	16.2%
Rate Base	327,897,479	351,470,841	23,573,363	7.2%

3
4 In 2020, Actual rate base was higher than 2019 Actual amounts by \$23,573,363, or 7.2%. The
5 increase was primarily driven by a \$18,627,451 increase to the average net fixed assets, most of
6 which was as a result of investments made in Distribution Plant assets. Investments were
7 primarily attributable to Subdivision Rebuilds and developer-driven work. For more details on
8 capital additions, see Section 2.2 of this Exhibit. WCA also increased from 2019 to 2020, the
9 majority of which was due to a significant increase in COP expenses. This was due to the ending
10 of the Ontario Fair Hydro Plan in November 2019.

1 **2020 Actuals vs. 2021 Bridge Year**

2 **Table 2-6 – 2020 Actuals vs. 2021 Bridge Year – Rate Base**

RATE BASE VARIANCE ANALYSIS				
2020 Actuals vs 2021 Bridge Year				
	2020 Actual	2021 Bridge	Variance	Variance
	\$	\$	\$	%
Net Fixed Assets (Average)				
Gross Fixed Assets (Average)	530,135,018	555,868,283	25,733,264	4.9%
Accumulated Depreciation (Average)	214,224,028	222,754,880	8,530,852	4.0%
	315,910,990	333,113,403	17,202,413	5.4%
Allowance for Working Capital				
Controllable Expenses	40,495,943	42,347,740	1,851,797	4.6%
Cost of Power (COP)	433,635,408	465,042,453	31,407,045	7.2%
Total Controllable Expenses & COP	474,131,351	507,390,193	33,258,842	7.0%
WCA Rate	7.50%	7.50%	-	
	35,559,851	38,054,264	2,494,413	7.0%
Rate Base	351,470,841	371,167,667	19,696,826	5.6%

3

4 In 2021, rate base is projected to be higher than 2020 Actual amounts by \$19,696,826, or 5.6%.

5 The increase is projected to be primarily driven by a \$17,202,413 increase to the average net

6 fixed assets, most of which was as a result of investments made in Distribution Plant assets. A

7 large portion of planned 2021 spending pertains to the City of London transit and infrastructure

8 improvements. For more details on capital additions, see Section 2.2 of this Exhibit. WCA is also

9 projected to increase from 2020 to 2021, the majority of which was due to an increase in COP

10 expenses.

1 **2021 Bridge Year vs. 2022 Test Year**

2 **Table 2-7 – 2021 Bridge Year vs. 2022 Test Year – Rate Base**

RATE BASE VARIANCE ANALYSIS				
2021 Bridge Year vs 2022 Test Year				
	2021 Bridge	2022 Test	Variance	Variance
	\$	\$	\$	%
Net Fixed Assets (Average)				
Gross Fixed Assets (Average)	555,868,283	591,248,298	35,380,016	6.4%
Accumulated Depreciation (Average)	222,754,880	234,637,862	11,882,982	5.3%
	333,113,403	356,610,437	23,497,034	7.1%
Allowance for Working Capital				
Controllable Expenses	42,347,740	44,295,600	1,947,860	4.6%
Cost of Power (COP)	465,042,453	313,751,116	(151,291,337)	-32.5%
Total Controllable Expenses & COP	507,390,193	358,046,716	(149,343,477)	-29.4%
WCA Rate	7.50%	7.50%	-	
	38,054,264	26,853,504	(11,200,761)	-29.4%
Rate Base	371,167,667	383,463,940	12,296,273	3.3%

3

4 In 2022, rate base is projected to be higher than 2021 Bridge Year amounts by \$12,296,273, or

5 3.3%. The increase is projected to be primarily driven by a \$23,497,034 increase to the average

6 net fixed assets, most of which was as a result of investments made in Distribution Plant assets.

7 A large portion of this increase is due the conversion of Hydro One's Nelson Transformer Station.

8 London Hydro's capital contributions paid to Hydro One regarding this conversion were being held

9 in Account 1508 Advance Capital Module Accounts, and are budgeted to be transferred into rate

10 base effective January 1, 2022. For more details on capital additions, see Section 2.2 of this

11 Exhibit. More information on the ACM can be found within this Exhibit, in Section 2.7 entitled

12 "Addition of Previously Approved ACM and ICM Project Assets to Rate Base". COP expenses are

13 anticipated to decline significantly from 2021 to 2022. Based on guidance in the "Regulated Price

14 Plan: Price Report", issued on April 22, 2021 by the OEB, the 2022 COP values exclude the

15 Global Adjustment costs for Class A customers, as well as include the impacts of the Ontario

16 Energy Rebate. This is offsetting a portion of the increase due to net fixed assets described

17 above.

2.1.2 Fixed Asset Continuity Schedules

London Hydro has completed Fixed Asset Continuity Schedules, in accordance with Appendix 2-BA of the Filing Requirements, for each of the following years: 2017 OEB Approved, 2017 Actuals, 2018 Actuals, 2019 Actuals, 2020 Actuals, 2021 Bridge and 2022 Test Year. Refer to Table 2-8 below for a summary of those continuity schedules. Individual schedules can be found at the end of this Exhibit, Appendix 2-1.

Table 2-8 – Summary of Continuity Schedules

SUMMARY OF FIXED ASSET CONTINUITY SCHEDULES							
	2017 Actual	2017 OEB Approved	2018 Actual	2019 Actual	2020 Actual	2021 Bridge	2022 Test
	\$	\$	\$	\$	\$	\$	\$
Gross Fixed Assets							
Opening balance	450,224,234	450,224,234	465,870,538	489,060,633	516,605,054	543,664,983	568,071,583
Transfer regulatory deferrals	423,643	423,643	-	-	-	-	8,099,016
Additions	27,316,147	26,999,300	35,716,650	37,777,183	38,546,600	36,777,000	41,742,000
Disposals	(12,093,487)	(12,170,015)	(12,526,555)	(10,232,762)	(11,486,672)	(12,370,400)	(11,586,600)
Closing balance (excluding WIP)	465,870,538	465,477,163	489,060,633	516,605,054	543,664,983	568,071,583	606,325,998
Average Gross Fixed Assets	458,259,208	457,850,699	477,465,585	502,832,843	530,135,018	555,868,283	591,248,298
Accumulated Depreciation							
Opening balance	189,118,010	189,118,010	195,128,920	201,132,833	209,965,776	218,482,280	227,027,480
Transfer regulatory deferrals	178,785	178,785	-	-	-	-	2,213,782
Additions	17,917,560	18,062,727	18,454,512	18,846,727	19,945,989	20,913,500	22,379,800
Disposals	(12,085,435)	(12,164,791)	(12,450,600)	(10,013,783)	(11,429,485)	(12,368,300)	(11,586,600)
Closing balance	195,128,920	195,194,731	201,132,833	209,965,776	218,482,280	227,027,480	240,034,462
Average 1576 CGAAP to IFRS (2016)	(78,654)	(78,654)					
Average Accumulated Depreciation	192,134,204	192,077,717	198,130,877	205,549,305	214,224,028	222,754,880	234,637,862
Net Fixed Assets	270,741,617	270,282,432	287,927,800	306,639,277	325,182,703	341,044,103	366,291,537

Table 2-9 below reconciles the change in Accumulated Depreciation, shown above, to the annual depreciation expense (as reported in Exhibit 4, Section 4.6, 'Depreciation and Amortization Expense'), as per Section 2.2.1.2 of the Filing Requirements.

Table 2-9 – Reconciliation of Change in Accumulated Depreciation to Depreciation Expense

DEPRECIATION EXPENSE RECONCILIATION 2017 - 2022							
	2017 Actual	2017 OEB Approved	2018 Actual	2019 Actual	2020 Actual	2021 Bridge	2022 Test
	\$	\$	\$	\$	\$	\$	\$
Change in Accumulated Depreciation	17,917,560	18,062,727	18,454,512	18,846,727	19,945,989	20,913,500	22,379,800
Add: Amortization of 1576 MIFRS Transition	39,327	-	-	-	-	-	-
Less: V&E (included in OH Allocation)	(1,009,502)	(1,053,100)	(1,050,619)	(1,084,990)	(1,078,272)	(1,144,000)	(1,206,000)
Less: Deferred Revenue	279,829	263,081	411,680	524,629	678,150	836,000	975,000
Depreciation Expense	17,227,213	17,272,708	17,815,573	18,286,365	19,545,867	20,605,500	22,148,800

2.2 GROSS ASSETS – Property, Plant and Equipment and Accumulated Depreciation

Below are the details of London Hydro's Gross Asset and Accumulated Depreciation balances for the 2017 OEB Approved Year, 2017-2020 Historical Years, 2021 Bridge Year, and 2022 Test Year. This information is captured in the following tables:

- Table 2-10 – Gross Asset Balances 2017 to 2022
- Table 2-17 – Accumulated Depreciation Balances 2017 to 2022

These tables break down gross assets and accumulated depreciation first by function and then further by major plant account.

The gross assets and accumulated depreciation are broken down into the following four functions:

- Distribution Plant Asset Accounts include the Uniform System of Accounts (USoA) accounts 1609, 1612, and 1805 – 1860
- General Plant Asset Accounts include the USoA accounts 1908 – 1980 (excluding 1920), and 2005
- Information Systems Asset Accounts include the USoA accounts 1920 and 1611 (formerly 1925)
- Contributions and grants include the USoA accounts 1995 and 2440

For each of these functionalized plant items, a detailed breakdown by major plant account is provided. Each plant item is accompanied by a description in accordance with the Board's USoA, including the 2022 Test Year, per Filing Requirement 2.2.1.2.

2.2.1 Variance Analysis of Gross Asset Balances

London Hydro's gross asset balances are projected to be \$606,325,998 at the end of the 2022 Test Year, representing an increase of \$140,848,836 between the 2017 OEB Approved Year and 2022, as shown in Table 2-10. Significant annual variances broken down by function are discussed below.

Table 2-10 – Gross Asset Balances 2017 to 2022

GROSS ASSET BALANCES 2017 TO 2022								
	2017 Actual	2017 OEB Approved	2018 Actual	2019 Actual	2020 Actual	2021 Bridge	2022 Test	2017 OEB Approved to 2022 Test
	\$	\$	\$	\$	\$	\$	\$	\$
Distribution Plant								
1609 Capital Contributions Paid	-	-	-	-	-	-	5,507,706	5,507,706
1805 Land - Substations	385,690	385,690	385,690	385,690	379,690	379,690	379,690	(6,000)
1612 Land Rights	458,896	428,760	539,801	571,930	688,377	474,177	414,877	(13,883)
1808 Buildings - Substations	1,381,909	1,174,988	1,389,995	1,389,995	1,389,995	1,435,995	1,483,995	309,007
1820 /1610 Substation Equipment	17,826,301	17,768,084	17,822,562	17,641,399	17,866,812	18,024,512	18,065,312	297,228
1830 Poles, Towers & Fixtures	46,422,523	47,408,401	48,148,216	49,945,964	52,662,367	54,423,267	56,301,767	8,893,366
1835 OH Conductors & Devices	65,835,735	67,806,462	68,548,307	71,711,569	75,605,392	79,146,192	83,469,992	15,663,529
1840 UG Conduit	53,817,043	53,223,953	62,052,390	71,563,824	82,180,806	89,261,406	96,516,606	43,292,653
1845 UG Conductor & Devices	95,203,503	94,803,721	96,662,276	99,423,796	102,828,087	106,161,187	111,686,087	16,882,366
1850 Line Transformers	98,692,211	97,487,743	103,375,265	106,352,664	111,124,719	116,134,319	119,957,819	22,470,076
1855 Services (OH & UG)	35,140,425	34,189,508	40,824,480	46,204,229	50,877,891	55,679,691	61,496,891	27,307,383
1860 Meters	30,058,559	29,135,486	31,050,935	32,477,169	33,679,999	34,620,299	35,725,099	6,589,613
	445,222,794	443,812,796	470,799,918	497,668,229	529,284,134	555,740,734	591,005,841	147,193,045
General Plant								
2005 Property Under Finance Lease	-	-	2,318,969	2,318,969	2,318,969	2,318,969	2,318,969	2,318,969
1908 Buildings & Fixtures	23,092,451	23,077,076	24,286,765	26,045,377	25,175,564	27,290,564	28,073,664	4,996,588
1915 Office Furniture & Equipment	682,678	763,348	872,335	1,107,402	1,270,267	1,760,467	2,302,767	1,539,419
1930 Transportation Equipment	13,014,911	13,172,215	13,194,067	13,307,102	14,853,629	15,203,529	15,687,229	2,515,014
1935 Stores Equipment	291,025	315,409	319,838	333,638	344,166	359,166	370,866	55,457
1940 Tools, Shop & Garage Equipment	951,540	968,010	912,665	830,909	987,170	1,115,070	1,228,970	260,960
1945 Measurement & Testing Equipment	964,106	933,926	1,116,529	1,314,550	1,343,478	1,500,078	1,558,378	624,452
1950 Power Operated Equipment	1,278,111	1,103,479	1,077,503	1,376,824	1,276,824	1,276,824	1,358,724	255,246
1955 Communication Equipment	5,079,714	4,816,007	5,081,980	5,093,334	5,538,729	6,088,729	6,466,429	1,650,422
1960 Miscellaneous Equipment	4,039	4,039	4,039	57,660	61,115	81,115	101,115	97,076
1980 System Supervisory Equipment	4,744,384	4,303,746	4,830,199	5,303,054	5,892,666	6,775,766	7,356,666	3,052,920
	50,102,961	49,457,255	54,014,887	57,088,818	59,062,577	63,770,277	66,823,777	17,366,522
Information Systems								
1920 Computer - Hardware	1,501,860	1,566,287	1,505,207	1,200,639	1,315,919	1,628,219	2,160,919	594,632
1611 Computer - Software	22,483,555	21,976,588	20,976,520	23,241,789	23,435,565	22,899,565	26,860,675	4,884,087
	23,985,416	23,542,875	22,481,728	24,442,427	24,751,484	24,527,784	29,021,594	5,478,719
Total Gross Balance before Contributed Capital	519,311,171	516,812,926	547,296,533	579,199,474	613,098,196	644,038,796	686,851,212	170,038,286
1995 /2440 Contributions and Grants	(53,440,633)	(51,335,763)	(58,235,901)	(62,594,420)	(69,433,213)	(75,967,213)	(80,525,213)	(29,189,450)
	465,870,538	465,477,163	489,060,633	516,605,054	543,664,983	568,071,583	606,325,998	140,848,836

1 **2017 OEB Approved vs. 2017 Actuals**

2 In 2017, London Hydro's actual gross asset balances were higher than 2017 OEB Approved
3 amounts by \$393,375, or 0.1%. See Table 2-11 below for breakdown of gross asset balances by
4 function and major plant account.

5 **Table 2-11 – 2017 OEB Approved vs. 2017 Actuals Gross Assets by Account**

GROSS ASSET VARIANCE ANALYSIS				
2017 OEB APPROVED vs. 2017 ACTUALS				
	2017	2017	Variance	Variance
	Actual	OEB Approved		
	\$	\$	\$	%
Distribution Plant				
1805 Land - Substations	385,690	385,690	-	0%
1612 Land Rights	458,896	428,760	30,136	7%
1808 Buildings - Substations	1,381,909	1,174,988	206,921	15%
1820 /1610 Substation Equipment	17,826,301	17,768,084	58,218	0%
1830 Poles, Towers & Fixtures	46,422,523	47,408,401	(985,878)	-2%
1835 OH Conductors & Devices	65,835,735	67,806,462	(1,970,727)	-3%
1840 UG Conduit	53,817,043	53,223,953	593,089	1%
1845 UG Conductor & Devices	95,203,503	94,803,721	399,782	0%
1850 Line Transformers	98,692,211	97,487,743	1,204,468	1%
1855 Services (OH & UG)	35,140,425	34,189,508	950,917	3%
1860 Meters	30,058,559	29,135,486	923,073	3%
	445,222,794	443,812,796	1,409,999	0%
General Plant				
1908 Buildings & Fixtures	23,092,451	23,077,076	15,375	0%
1915 Office Furniture & Equipment	682,678	763,348	(80,670)	-12%
1930 Transportation Equipment	13,014,911	13,172,215	(157,304)	-1%
1935 Stores Equipment	291,025	315,409	(24,385)	-8%
1940 Tools, Shop & Garage Equipment	951,540	968,010	(16,470)	-2%
1945 Measurement & Testing Equipment	964,106	933,926	30,181	3%
1950 Power Operated Equipment	1,278,111	1,103,479	174,632	14%
1955 Communication Equipment	5,079,714	4,816,007	263,708	5%
1960 Miscellaneous Equipment	4,039	4,039	-	
1980 System Supervisory Equipment	4,744,384	4,303,746	440,638	9%
	50,102,961	49,457,255	645,706	1%
Information Systems				
1920 Computer - Hardware	1,501,860	1,566,287	(64,426)	-4%
1611 Computer - Software	22,483,555	21,976,588	506,967	2%
	23,985,416	23,542,875	442,541	2%
Total Gross Balance before Contributed Capital				
	519,311,171	516,812,926	2,498,245	0%
1995 /2440 Contributions and Grants	(53,440,633)	(51,335,763)	(2,104,870)	4%
Total	465,870,538	465,477,163	393,375	0.1%

1 *Distribution Plant: Variance (\$1,409,999)*

2 In 2017, actual Distribution Plant assets were \$1,409,999 higher than the 2017 OEB Approved
3 amount. Details regarding this variance are explained below:

- 4 • Actual investments in Distribution Plant were significantly higher than planned due to the
5 increased demand in developer-driven projects related to residential condominium and
6 subdivision developments, secondary service upgrades and commercial connections. The
7 2017 OEB Approved capital additions budget for Developer Projects was \$4.5M, however
8 actual capital additions were approximately \$9.9M, resulting primarily in increased
9 investments to Underground Conductors and Conduit (Accounts 1840-1845),
10 Transformers (Account 1850), Services (Account 1855) and Meters (Account 1860).
11 Although investments in these accounts were \$4M higher than planned, investments to
12 Poles, Towers & Fixtures (Account 1830) and Overhead Conductors and Devices
13 (Account 1835) were \$2.9M lower than planned (explained below), resulting in the overall
14 increase in Distribution Plant assets.
- 15 • Investments in Poles, Towers & Fixtures (Account 1830) and Overhead Conductors and
16 Devices (Account 1835) were lower than expected because project spending within the
17 Overhead Line Work spending area was lower than anticipated. A major overhead
18 conversion project which was anticipated to be complete in 2017 was incomplete at the
19 end of the year, and was not capitalized until 2018.

20 *General Plant: Variance \$645,706*

21 In 2017, Actual General Plant assets were \$645,706 higher than the 2017 OEB Approved amount.
22 Details regarding this variance are explained below:

- 23 • Actual investments in System Supervisory Equipment were \$440,638 higher than planned
24 due to an increase in scope to upgrade 2 additional SCADA-controlled reclosers.
- 25 • Changes to planned purchases of Vehicles and Major Equipment resulted in a reduction
26 in spending for small and large vehicles under Transportation Equipment (Account 1930),
27 in order to prioritize the purchase of two Case Extendable Backhoes, which has been
28 reflected in Power Operated Equipment (Account 1950).

- 1 • OEB Approved spending for the AMI Communication Renewal project was originally
2 budgeted under Meters (Account 1860), but actual spending resulted in an increase in
3 asset additions to Communication Equipment (Account 1955).

4 *Information Systems: Variance \$442,541*

5 In 2017, Actual Information Systems assets were \$442,541 more than the 2017 OEB Approved
6 amount. Additions to Software were \$506,967 higher than the 2017 OEB Approved amounts. This
7 was primarily as a result of unplanned spending required to improve the reliability and compliance
8 of London Hydro's data backup and disaster recovery capabilities.

9 *Contributions and Grants: Variance (\$2,104,870)*

10 In 2017, London Hydro collected \$2,104,870 more contributed capital than the 2017 OEB
11 Approved Amount. This is primarily due to the increase in demand for developer-driven projects
12 related to residential condominium and subdivision developments, secondary service upgrades
13 and commercial connections.

1 **2017 Actuals vs. 2018 Actuals**

2 London Hydro's gross asset balances increased by \$23,190,095, or 5.0%, between the 2017 and
3 2018 Actuals. See Table 2-12 below for a breakdown of gross asset balances by function and
4 major plant account.

5 **Table 2-12 – 2017 Actuals vs. 2018 Actuals Gross Assets by Account**

GROSS ASSET VARIANCE ANALYSIS				
2017 ACTUALS vs. 2018 ACTUALS				
	2017	2018	Variance	Variance
	Actual	Actual		
	\$	\$	\$	%
Distribution Plant				
1805 Land - Substations	385,690	385,690	-	0%
1612 Land Rights	458,896	539,801	80,905	18%
1808 Buildings - Substations	1,381,909	1,389,995	8,087	1%
1820 /1610 Substation Equipment	17,826,301	17,822,562	(3,739)	0%
1830 Poles, Towers & Fixtures	46,422,523	48,148,216	1,725,693	4%
1835 OH Conductors & Devices	65,835,735	68,548,307	2,712,572	4%
1840 UG Conduit	53,817,043	62,052,390	8,235,348	15%
1845 UG Conductor & Devices	95,203,503	96,662,276	1,458,773	2%
1850 Line Transformers	98,692,211	103,375,265	4,683,054	5%
1855 Services (OH & UG)	35,140,425	40,824,480	5,684,055	16%
1860 Meters	30,058,559	31,050,935	992,377	3%
	445,222,794	470,799,918	25,577,124	6%
General Plant				
2005 Property Under Finance Lease	-	2,318,969	2,318,969	
1908 Buildings & Fixtures	23,092,451	24,286,765	1,194,314	5%
1915 Office Furniture & Equipment	682,678	872,335	189,656	28%
1930 Transportation Equipment	13,014,911	13,194,067	179,156	1%
1935 Stores Equipment	291,025	319,838	28,813	10%
1940 Tools, Shop & Garage Equipment	951,540	912,665	(38,875)	-4%
1945 Measurement & Testing Equipment	964,106	1,116,529	152,423	16%
1950 Power Operated Equipment	1,278,111	1,077,503	(200,609)	-16%
1955 Communication Equipment	5,079,714	5,081,980	2,265	0%
1960 Miscellaneous Equipment	4,039	4,039	-	0.0%
1980 System Supervisory Equipment	4,744,384	4,830,199	85,814	2%
	50,102,961	54,014,887	3,911,926	8%
Information Systems				
1920 Computer - Hardware	1,501,860	1,505,207	3,347	0%
1611 Computer - Software	22,483,555	20,976,520	(1,507,035)	-7%
	23,985,416	22,481,728	(1,503,688)	-6%
Total Gross Balance before Contributed Capital	519,311,171	547,296,533	27,985,363	5%
1995 /2440 Contributions and Grants	(53,440,633)	(58,235,901)	(4,795,268)	9%
Total	465,870,538	489,060,633	23,190,095	5.0%

1 *Distribution Plant: Variance \$25,577,124*

2 *Variance attributable to Additions: \$30,789,316. Variance attributable to Disposals: (\$5,212,192).*

3 In 2018, Actual Distribution Plant assets were higher than 2017 Actual amounts by \$25,577,124.
4 Distribution asset net additions are primarily driven by System Access and System Renewal
5 investments. Details regarding this variance are described below:

- 6 • Capital spending for demand-driven developer projects continued to remain strong in 2018
7 resulting in capital expenditures of \$8,669,854. These in turn increased investments
8 primarily in Underground Conductors and Conduit, Transformers, Services and Meters
9 (Accounts 1840 – 1860).
- 10 • Investments in Distribution Plant also increased as a result of increased project spending
11 related to the replacement of aging civil structures along Dundas Street. In 2018, the City
12 of London started a major rebuild of Dundas Street, near the downtown core. This
13 presented London Hydro with the opportunity to replace deteriorated ducts, vaults, cables
14 and transformers by coordinating with the City of London's major refurbishment of Dundas
15 Place.
- 16 • Assets that were removed from the gross asset balance in 2018 were \$5,212,192.

17 *General Plant: Variance \$3,911,926*

18 *Variance attributable to Additions: \$5,215,163. Variance attributable to Disposals: (\$1,303,237).*

19 In 2018, Actual General Plant assets were higher than 2017 Actual amounts by \$3,911,926.
20 Details regarding this variance are described below:

- 21 • Increased investments in Buildings and Fixtures (Account 1908) were attributable to
22 improvements and renovations of London Hydro main office and operations buildings. This
23 included office renovations completed to accommodate the changing needs of the
24 workforce, along with updates to outdated fixtures such as flooring, lighting and ventilation.
25 The renovations resulted in increased natural light available to employees, improved
26 heating and cooling, better utilized space and an improved work environment.
- 27 • In 2018, the adoption of IFRS 16 "Leases" resulted in the addition of a \$2,318,969 capital
28 lease for the recognition of Property Under Finance Lease (Account 2005). This
29 represents the land on which London Hydro's main office and operations buildings are
30 located, at 111 Horton Street.

- 1 • Assets that were removed from the gross asset balance in 2018 were \$1,303,237. Most
2 of this pertains to the disposal of fully-depreciated System Supervisory equipment, as well
3 as the sale of multiple vehicles and power operated equipment with an original cost of
4 \$662,918.

5 *Information Systems: Variance (\$1,503,688)*

6 *Variance attributable to Additions: \$4,507,439. Variance attributable to Disposals: (\$6,011,127).*

7 In 2018, Actual Information Systems assets were lower than the 2017 Actual amounts by
8 \$1,503,688. Details regarding this variance are described below:

- 9 • Additions to Software in 2018 were \$3,872,776, however fully-depreciated software with
10 an original cost of \$5,379,810 was disposed of in 2018.
- 11 • The following major software projects went live in 2018:
- 12 ○ Customer engagement enhancements to Trickl and Commercial and Industrial
13 ("C&I") Interval Data Centre
 - 14 ○ Mobile Workforce Automation for Collectors
 - 15 ○ Regional Network Interface (RNI) Upgrade
 - 16 ○ Simplified Bill and Proactive Alerts for usage and billing
 - 17 ○ Vegetation Management

18 *Contributions and Grants: Variance (\$4,795,268)*

19 In 2018, London Hydro collected \$4,795,268 in contributed capital from developer-driven projects
20 related to residential condominium and subdivision developments, secondary service upgrades
21 and commercial connections.

1 **2018 Actuals vs. 2019 Actuals**

2 London Hydro's gross asset balances increased by \$27,544,421, or 5.6%, between the 2018 and
3 2019 Actuals. See Table 2-13 below for a breakdown of gross asset balances by function and
4 major plant account.

5 **Table 2-13 – 2018 Actuals vs. 2019 Actuals Gross Assets by Account**

GROSS ASSET VARIANCE ANALYSIS				
2018 ACTUALS vs. 2019 ACTUALS				
	2018	2019	Variance	Variance
	Actual	Actual		
	\$	\$	\$	%
Distribution Plant				
1805 Land - Substations	385,690	385,690	-	0%
1612 Land Rights	539,801	571,930	32,129	6%
1808 Buildings - Substations	1,389,995	1,389,995	-	0%
1820 /1610 Substation Equipment	17,822,562	17,641,399	(181,163)	-1%
1830 Poles, Towers & Fixtures	48,148,216	49,945,964	1,797,747	4%
1835 OH Conductors & Devices	68,548,307	71,711,569	3,163,262	5%
1840 UG Conduit	62,052,390	71,563,824	9,511,434	15%
1845 UG Conductor & Devices	96,662,276	99,423,796	2,761,520	3%
1850 Line Transformers	103,375,265	106,352,664	2,977,399	3%
1855 Services (OH & UG)	40,824,480	46,204,229	5,379,749	13%
1860 Meters	31,050,935	32,477,169	1,426,234	5%
	470,799,918	497,668,229	26,868,310	6%
General Plant				
2005 Property Under Finance Lease	2,318,969	2,318,969	-	0%
1908 Buildings & Fixtures	24,286,765	26,045,377	1,758,612	7%
1915 Office Furniture & Equipment	872,335	1,107,402	235,067	27%
1930 Transportation Equipment	13,194,067	13,307,102	113,035	1%
1935 Stores Equipment	319,838	333,638	13,800	4%
1940 Tools, Shop & Garage Equipment	912,665	830,909	(81,756)	-9%
1945 Measurement & Testing Equipment	1,116,529	1,314,550	198,020	18%
1950 Power Operated Equipment	1,077,503	1,376,824	299,322	28%
1955 Communication Equipment	5,081,980	5,093,334	11,355	0%
1960 Miscellaneous Equipment	4,039	57,660	53,621	1327.6%
1980 System Supervisory Equipment	4,830,199	5,303,054	472,856	10%
	54,014,887	57,088,818	3,073,931	6%
Information Systems				
1920 Computer - Hardware	1,505,207	1,200,639	(304,569)	-20%
1611 Computer - Software	20,976,520	23,241,789	2,265,268	11%
	22,481,728	24,442,427	1,960,700	9%
Total Gross Balance before Contributed Capital	547,296,533	579,199,474	31,902,940	6%
1995 /2440 Contributions and Grants	(58,235,901)	(62,594,420)	(4,358,519)	7%
Total	489,060,633	516,605,054	27,544,421	5.6%

1 *Distribution Plant: Variance \$26,868,310*

2 *Variance attributable to Additions: \$31,481,924. Variance attributable to Disposals: (\$4,613,614)*

3 In 2019, Actual Distribution Plant assets were higher than 2018 Actual amounts by \$26,868,310.
4 Distribution asset net additions are primarily driven by System Access and System Renewal
5 investments. Details regarding this variance are described below:

- 6 • Project spending related to the replacement of aging civil structures along Dundas Street
7 continued as Phase 2 of the project commenced in 2019. London Hydro was required to
8 accelerate the timeline of replacing ducts, vaults, cables and transformers in the downtown
9 area in order to coordinate with the City of London's major refurbishment of Dundas Place.
10 This resulted in increased investments to Underground Conduit, Conductors, Line
11 Transformers and Services (Accounts 1840-1855).
- 12 • Capital spending for demand-driven developer projects continued to remain strong in 2019
13 resulting in capital expenditures of \$9,824,439. These in turn increased investments
14 primarily in Underground Conductors and Conduit, Transformers, Services and Meters
15 (Accounts 1840 - 1860).
- 16 • Increased investments to Overhead Conductors and Devices (Account 1835) can be
17 attributed to increased capital spending for the installation of new 27.6kV feeders in order
18 to accommodate the conversion of the Nelson Transformer Station.
- 19 • Assets that were removed from the gross asset balance in 2019 were \$4,613,614.

20 *General Plant: Variance \$3,073,931*

21 *Variance attributable to Additions: \$4,163,375. Variance attributable to Disposals: (\$1,089,444).*

22 In 2019, Actual General Plant assets were higher than 2019 Actual amounts by \$3,073,931.

23 Details regarding this variance are described below:

- 24 • Increased investments in Buildings and Fixtures (Account 1908) were attributable to
25 continued improvements and renovations of London Hydro main office and operations
26 building. This included office renovations completed to accommodate the changing needs
27 of the workforce, along with updates to outdated fixtures such as flooring, lighting and
28 ventilation. This also includes the civil structure upgrades required to accommodate two
29 new garage hoists as a result of unexpected failure of two existing garage hoists.

- 1 • Increased investments in System Supervisory Equipment (Account 1980) was primarily
2 driven by System Service and System Access investments, related to increased
3 installation of SCADA-controlled switches, reclosers and remote terminal units (RTU's).
- 4 • Assets that were removed from the gross asset balance in 2019 were \$1,089,444.

5 *Information Systems: Variance \$1,960,700*

6 *Variance attributable to Additions: \$6,490,403. Variance attributable to Disposals: (\$4,529,703)*

7 In 2019, Actual Information Systems assets were higher than the 2018 Actual amounts by
8 \$1,960,700. Details regarding this variance are described below:

- 9 • The majority of this increase was due to Computer Software, which increased by
10 \$2,265,268. The following major software projects went live in 2019:
 - 11 ○ JD Edwards Enhancements related to Engineering and Operations Project
12 Management and Inventory Barcoding
 - 13 ○ Payroll System Upgrade
 - 14 ○ Mobile Application Enhancements for MyLondonHydro customer portal and
15 Corporate Website
 - 16 ○ Application Platform Refresh
- 17 • New Hardware investments of \$335,301 were capitalized in 2019, however fully-
18 depreciated Hardware assets with an original cost of \$639,870 were disposed of, resulting
19 in an overall reduction of \$304,569 in Computer Hardware Assets.

20 *Contributions and Grants: Variance (\$4,358,519)*

21 In 2019, London Hydro collected \$4,358,519 in contributed capital from developer-driven projects
22 related to residential condominium and subdivision developments, secondary service upgrades
23 and commercial connections.

1 **2019 Actuals vs. 2020 Actuals**

2 London Hydro's gross asset balances increased by \$27,059,929, or 5.2 %, between the 2019 and
3 2020 Actuals. See Table 2-14 below for a breakdown of gross asset balances by function and
4 major plant account.

5 **Table 2-14 – 2019 Actuals vs. 2020 Actuals Gross Assets by Account**

GROSS ASSET VARIANCE ANALYSIS				
2019 ACTUALS vs. 2020 ACTUALS				
	2019	2020	Variance	Variance
	Actual	Actual		
	\$	\$	\$	%
Distribution Plant				
1805 Land - Substations	385,690	379,690	(6,000)	-2%
1612 Land Rights	571,930	688,377	116,447	20%
1808 Buildings - Substations	1,389,995	1,389,995	-	0%
1820 /1610 Substation Equipment	17,641,399	17,866,812	225,413	1%
1830 Poles, Towers & Fixtures	49,945,964	52,662,367	2,716,403	5%
1835 OH Conductors & Devices	71,711,569	75,605,392	3,893,823	5%
1840 UG Conduit	71,563,824	82,180,806	10,616,982	15%
1845 UG Conductor & Devices	99,423,796	102,828,087	3,404,291	3%
1850 Line Transformers	106,352,664	111,124,719	4,772,055	4%
1855 Services (OH & UG)	46,204,229	50,877,891	4,673,661	10%
1860 Meters	32,477,169	33,679,999	1,202,830	4%
	497,668,229	529,284,134	31,615,906	6%
General Plant				
2005 Property Under Finance Lease	2,318,969	2,318,969	-	0%
1908 Buildings & Fixtures	26,045,377	25,175,564	(869,813)	-3%
1915 Office Furniture & Equipment	1,107,402	1,270,267	162,865	15%
1930 Transportation Equipment	13,307,102	14,853,629	1,546,528	12%
1935 Stores Equipment	333,638	344,166	10,528	3%
1940 Tools, Shop & Garage Equipment	830,909	987,170	156,261	19%
1945 Measurement & Testing Equipment	1,314,550	1,343,478	28,928	2%
1950 Power Operated Equipment	1,376,824	1,276,824	(100,000)	-7%
1955 Communication Equipment	5,093,334	5,538,729	445,394	9%
1960 Miscellaneous Equipment	57,660	61,115	3,455	6%
1980 System Supervisory Equipment	5,303,054	5,892,666	589,612	11%
	57,088,818	59,062,577	1,973,759	3%
Information Systems				
1920 Computer - Hardware	1,200,639	1,315,919	115,281	10%
1611 Computer - Software	23,241,789	23,435,565	193,777	1%
	24,442,427	24,751,484	309,057	1%
Total Gross Balance before Contributed Capital	579,199,474	613,098,196	33,898,722	6%
1995 /2440 Contributions and Grants	(62,594,420)	(69,433,213)	(6,838,793)	11%
Total	516,605,054	543,664,983	27,059,929	5.2%

1 *Distribution Plant: Variance \$31,615,906*

2 *Variance attributable to Additions: \$34,740,430. Variance attributable to Disposals: (\$3,124,524).*

3 In 2020, Actual Distribution Plant assets were higher than 2019 Actual amounts by \$31,615,906.
4 Distribution asset net additions are primarily driven by System Access and System Renewal
5 investments. Details regarding this variance are described below:

- 6 • Increased investments in Underground Conduit, Conductors and Devices, Transformers
7 and Services (Accounts 1840-1855) was primarily attributable to capital spending of
8 \$9,049,543 within the Subdivision Rebuilds capital spending category. This work was
9 completed to replace assets that have been assessed as being in poor condition, often
10 contributing to unsatisfactory reliability or requiring conversion.
- 11 • Capital spending for demand-driven developer projects continued to remain strong in 2020
12 resulting in capital expenditures of \$9,855,787. This in turn increased investments
13 primarily in Underground Conductors and Conduit, Transformers, Services and Meters
14 (Accounts 1840 – 1860).
- 15 • Assets that were removed from the gross asset balance in 2020 were \$3,124,524.

16 *General Plant: Variance \$1,973,759*

17 *Variance attributable to Additions: \$4,889,545. Variance attributable to Disposals: (\$2,915,786)*

18 In 2020, Actual General Plant assets were higher than 2019 Actual amounts by \$1,973,759.
19 Details regarding this variance are described below:

- 20 • Capital spending related to London Hydro's main office and operations building was
21 significantly reduced in 2020 as multiple planned projects were delayed due to COVID-
22 19. Additions to Buildings & Fixtures (Account 1908) were \$1,056,381 and were primarily
23 related to a new four post lift installed in the garage, upgrades to building electrical and
24 ventilation, and COVID-19 related facility upgrades. In addition, fully-depreciated Buildings
25 and Fixtures assets with an original cost of \$1,926,194 were disposed of in 2020.
- 26 • Investments in Transportation Equipment (Account 1930) increased by \$1,546,528
27 primarily due to the purchase of additional fleet vehicles to replace older units. Capital
28 spending for Vehicles and Major Equipment in 2020 was consistent with prior years,
29 however planned vehicle disposals were lower than anticipated due to COVID-19. London
30 Hydro delayed the sale of older units in 2020 to ensure sufficient fleet was available for

1 transportation to and from worksites, as the company made the decision that all
2 employees would travel in individual vehicles to ensure appropriate social distancing could
3 be maintained.

- 4 • Increased investments in Communication Equipment (Account 1955) were primarily
5 attributable to enhancements to London Hydro's Advanced Metering Infrastructure (AMI).
6 In 2020, enhancements were made to the AMI Network to address capacity concerns in
7 highly congested sites. The project involved the installation of additional transceiver
8 gateway base stations (TGB's) and antennas at Substation 15 to increase capacity,
9 ensure high availability, and increase performance while allowing for future expansion
10 when necessary.
- 11 • Increased investments in System Supervisory Equipment (Account 1980) was primarily
12 driven by System Service and System Access investments related to increased installation
13 of SCADA-controlled switches, reclosers and RTU's.
- 14 • Assets that were removed from the gross asset balance in 2020 were \$2,915,786.

15 *Information Systems: Variance \$309,057*

16 *Variance attributable to Additions: \$5,755,418. Variance attributable to Disposals: (\$5,446,361)*

17 In 2020, Actual Information Systems assets were higher than the 2019 Actual amounts by
18 \$309,057. Details regarding this variance are described below:

- 19 • The following major software projects went live in 2020:
 - 20 ○ Cyber Security Initiatives
 - 21 ○ GIS Upgrade
 - 22 ○ Contact Centre Enhancements
 - 23 ○ Residential MyLondonHydro and Mobile App Enhancements
 - 24 ○ Accounts Payable Automation
- 25 • London Hydro increased capital spending for Hardware in order to facilitate employees
26 working from home.
- 27 • Fully-depreciated assets that were removed from the gross asset balance in 2020 were
28 \$5,446,361.

1 *Contributions and Grants: Variance (\$6,838,793)*

2 In 2020, London Hydro collected \$6,838,793 in contributed capital from developer-driven projects
3 related to residential condominium and subdivision developments, secondary service upgrades
4 and commercial connections. This included a final capital contribution of \$1,756,904 related to
5 the final annual review of the City of London's Innovation Park Expansion (Phase 2).

1 2020 Actuals vs. 2021 Bridge Year

2 London Hydro's gross asset balances are budgeted to increase by \$24,406,600, or 4.5%,
3 between the 2020 Actuals and the 2021 Bridge Year. See Table 2-15 below for breakdown of
4 gross asset balances by function and major plant account.

5 **Table 2-15 – 2020 Actuals vs. 2021 Bridge Year Gross Assets by Account**

GROSS ASSET VARIANCE ANALYSIS				
2020 ACTUALS vs. 2021 BRIDGE				
	2020	2021	Variance	Variance
	Actuals	Bridge		
	\$	\$	\$	%
Distribution Plant				
1805 Land - Substations	379,690	379,690	-	0%
1612 Land Rights	688,377	474,177	(214,200)	-31%
1808 Buildings - Substations	1,389,995	1,435,995	46,000	3%
1820 /1610 Substation Equipment	17,866,812	18,024,512	157,700	1%
1830 Poles, Towers & Fixtures	52,662,367	54,423,267	1,760,900	3%
1835 OH Conductors & Devices	75,605,392	79,146,192	3,540,800	5%
1840 UG Conduit	82,180,806	89,261,406	7,080,600	9%
1845 UG Conductor & Devices	102,828,087	106,161,187	3,333,100	3%
1850 Line Transformers	111,124,719	116,134,319	5,009,600	5%
1855 Services (OH & UG)	50,877,891	55,679,691	4,801,800	9%
1860 Meters	33,679,999	34,620,299	940,300	3%
	529,284,134	555,740,734	26,456,600	5%
General Plant				
2005 Property Under Finance Lease	2,318,969	2,318,969	-	0%
1908 Buildings & Fixtures	25,175,564	27,290,564	2,115,000	8%
1915 Office Furniture & Equipment	1,270,267	1,760,467	490,200	39%
1930 Transportation Equipment	14,853,629	15,203,529	349,900	2%
1935 Stores Equipment	344,166	359,166	15,000	4%
1940 Tools, Shop & Garage Equipment	987,170	1,115,070	127,900	13%
1945 Measurement & Testing Equipment	1,343,478	1,500,078	156,600	12%
1950 Power Operated Equipment	1,276,824	1,276,824	-	0%
1955 Communication Equipment	5,538,729	6,088,729	550,000	10%
1960 Miscellaneous Equipment	61,115	81,115	20,000	33%
1980 System Supervisory Equipment	5,892,666	6,775,766	883,100	15%
	59,062,577	63,770,277	4,707,700	8%
Information Systems				
1920 Computer - Hardware	1,315,919	1,628,219	312,300	24%
1611 Computer - Software	23,435,565	22,899,565	(536,000)	-2%
	24,751,484	24,527,784	(223,700)	-1%
Total Gross Balance before Contributed Capital	613,098,196	644,038,796	30,940,600	5%
1995 /2440 Contributions and Grants	(69,433,213)	(75,967,213)	(6,534,000)	9%
Total	543,664,983	568,071,583	24,406,600	4.5%

1 *Distribution Plant: Variance \$26,456,600*

2 *Variance attributable to Additions: \$31,124,200. Variance attributable to Disposals: (\$4,667,600)*

3 Distribution Plant assets in the 2021 Bridge Year are projected to be higher than 2020 Actual
4 amounts by \$26,456,600. Distribution asset net additions are primarily driven by System Access
5 and System Renewal investments. Details regarding this variance are described below:

- 6 • As the Road Authority (Public Service Works on Highways Act, R.S.O. 1990, c.P.49, n.d.),
7 the City of London has planned to construct major transit and infrastructure improvements
8 beginning in 2021 and extending over the next several years. As a result, London Hydro
9 is required to relocate infrastructure that is in conflict with the planned construction.
10 Simultaneously, London Hydro will co-ordinate the replacement of aging infrastructure
11 within the planned transit locations. Capital spending directly related to these planned
12 transit projects in 2021 is \$1,564,000, which results in increased investment primarily in
13 Poles and Fixtures, Overhead and Underground Conductors and Devices, Underground
14 Conduit, Transformers and Services (Accounts 1830 – 1855).
- 15 • Capital spending for Developer Works Projects, such as new residential subdivisions and
16 condominiums, commercial connections and overhead line expansions is expected to be
17 \$8,505,000 in 2021. This results in increased investments primarily in Underground
18 Conductors and Conduit, Transformers, Services and Meters (Accounts 1840 - 1860).
- 19 • Fully-depreciated asset disposals are planned to be \$4,667,600.

20 *General Plant: Variance \$4,707,700*

21 *Variance attributable to Additions: \$6,863,800. Variance attributable to Disposals: (\$2,156,100)*

22 General Plant assets in the 2021 Bridge Year are projected to be higher than the 2020 Actual
23 amounts by \$4,707,700. Details regarding this variance are explained below:

- 24 • Forecasted increased investments in Buildings and Fixtures (Account 1908) is the result
25 of capital spending related to improvements and renovations of London Hydro main office
26 buildings, and operations building. The primary increase in investment for 2021 is
27 attributable to planned spending for a new fuel dispensing system including the
28 replacement of fuel tanks, fuel island and fuel pumps. A secure fuel source with a back-
29 up electrical supply is critical to the operations of London Hydro's fleet, particularly in
30 emergency situations. Our current fuel system, tanks and piping, is a single wall, at the

1 end of its useful life and is no longer TSSA compliant. Replacement is required to maintain
2 the fuel system and continue to pass annual inspection.

- 3 • Forecasted increased investments in Office Furniture and Equipment (Account 1915) is
4 primarily attributable to planned spending for new substation security systems. London
5 Hydro's existing security system utilizes older technology on a 2G cellular network which
6 is unreliable and subject to coverage drops, resulting in safety and asset theft risk. New
7 substation security equipment will provide a more secure and stable connection, better
8 camera quality and protection of substation assets.
- 9 • Investments in Transportation Equipment (Account 1930) are expected to increase by
10 \$349,900, primarily due to the purchase of additional fleet vehicles to replace older units.
11 It is planned that London Hydro will replace two bucket trucks, a cable puller truck, four
12 sport utility vehicles and three vans within 2021. The old units being replaced are at the
13 end of their useful life and are expected to be sold within the year.
- 14 • Forecasted increased investments in Communication Equipment (Account 1955) is
15 primarily attributable to enhancements to London Hydro's Advanced Metering
16 Infrastructure (AMI). In 2021, London Hydro plans to continue enhancements to the AMI
17 Network to address capacity concerns in highly congested sites.
- 18 • Assets that are budgeted to be removed from the gross asset balance in 2021 amount to
19 \$2,156,100.

20 *Information System: Variance (\$223,700)*

21 *Variance attributable to Additions: \$5,323,000. Variance attributable to Disposals: (\$5,546,700).*

22 Information Systems assets in the 2021 Bridge Year are projected to be lower than 2020 Actual
23 amounts by \$223,700. Details regarding this variance are explained below:

- 24 • Planned additions to Software in 2021 are \$4,376,000 and include the following major
25 software projects, that are planned to go live in the year:
 - 26 ○ Digital Platform Rendering Solution
 - 27 ○ GIS & OMS Upgrade
 - 28 ○ Improvements to customer engagement systems such as MyLondonHydro, Mobile
29 Apps and IDC
 - 30 ○ Fuel Pump Software

- 1 • Fully-depreciated software with an original cost of \$4,912,000 will also be disposed of in
2 the year.
- 3 • Planned additions to Hardware in 2021 are \$947,000 with fully-depreciated hardware
4 disposals projected to be \$634,700.

5 *Contributions and Grants: Variance (\$6,534,000)*

6 In 2021, it is anticipated that London Hydro will collect \$6,534,000 in contributed capital from
7 developer-driven projects related to residential condominium and subdivision developments,
8 secondary service upgrades and commercial connections. This amount includes a final capital
9 contribution of \$1,830,000 related to the final annual review of the City of London's Innovation
10 Park Expansion (Phases 3 and 4).

1 **2021 Bridge Year vs. 2022 Test Year**

2 London Hydro's gross asset balances are budgeted to increase by \$38,254,416, or 6.7%,
3 between the 2021 Bridge Year and the 2022 Test Year. See Table 2-16 below for a breakdown
4 of gross asset balances by function and major plant account.

5 **Table 2-16 - 2021 Bridge Year vs. 2022 Test Year Gross Assets by Account**

GROSS ASSET VARIANCE ANALYSIS				
2021 BRIDGE vs. 2022 TEST				
	2021	2022	Variance	Variance
	Bridge	Test		
	\$	\$	\$	%
Distribution Plant				
1609 Capital Contributions Paid	-	5,507,706	5,507,706	
1805 Land - Substations	379,690	379,690	-	0%
1612 Land Rights	474,177	414,877	(59,300)	-13%
1808 Buildings - Substations	1,435,995	1,483,995	48,000	3%
1820 /1610 Substation Equipment	18,024,512	18,065,312	40,800	0%
1830 Poles, Towers & Fixtures	54,423,267	56,301,767	1,878,500	3%
1835 OH Conductors & Devices	79,146,192	83,469,992	4,323,800	5%
1840 UG Conduit	89,261,406	96,516,606	7,255,200	8%
1845 UG Conductor & Devices	106,161,187	111,686,087	5,524,900	5%
1850 Line Transformers	116,134,319	119,957,819	3,823,500	3%
1855 Services (OH & UG)	55,679,691	61,496,891	5,817,200	10%
1860 Meters	34,620,299	35,725,099	1,104,800	3%
	555,740,734	591,005,841	35,265,106	6%
General Plant				
2005 Property Under Finance Lease	2,318,969	2,318,969	-	0%
1908 Buildings & Fixtures	27,290,564	28,073,664	783,100	3%
1915 Office Furniture & Equipment	1,760,467	2,302,767	542,300	31%
1930 Transportation Equipment	15,203,529	15,687,229	483,700	3%
1935 Stores Equipment	359,166	370,866	11,700	3%
1940 Tools, Shop & Garage Equipment	1,115,070	1,228,970	113,900	10%
1945 Measurement & Testing Equipment	1,500,078	1,558,378	58,300	4%
1950 Power Operated Equipment	1,276,824	1,358,724	81,900	6%
1955 Communication Equipment	6,088,729	6,466,429	377,700	6%
1960 Miscellaneous Equipment	81,115	101,115	20,000	25%
1980 System Supervisory Equipment	6,775,766	7,356,666	580,900	9%
	63,770,277	66,823,777	3,053,500	5%
Information Systems				
1920 Computer - Hardware	1,628,219	2,160,919	532,700	33%
1611 Computer - Software	22,899,565	26,860,675	3,961,109	17%
	24,527,784	29,021,594	4,493,809	18%
Total Gross Balance before Contributed Capital	644,038,796	686,851,212	42,812,416	7%
1995 /2440 Contributions and Grants	(75,967,213)	(80,525,213)	(4,558,000)	6%
Total	568,071,583	606,325,998	38,254,416	6.7%

1 *Distribution Plant: Variance \$35,265,106*

2 *Variance attributable to Additions: \$40,978,506. Variance attributable to Disposals: (\$5,713,400).*

3 Distribution Plant assets in the 2022 Test Year are projected to be higher than 2021 Bridge Year
4 by \$35,265,106. Distribution asset net additions are primarily driven by System Access and
5 System Renewal investments. Details regarding this variance are described below:

- 6 • Increased Investments to Capital Contributions Paid (Account 1609) are associated with
7 the conversion of Hydro One's Nelson Transformer Station (TS). In 2015, an agreement
8 was reached whereby Hydro One would rebuild the Nelson TS and London Hydro would
9 be responsible for only the incremental costs of conversion. This amount was previously
10 submitted and approved in the 2017 Cost of Service Rate Application, through an
11 Advanced Capital Model and will be transferred from the 1508 Advance Capital Module
12 Accounts into Gross Assets in 2022. More information on this can be found within this
13 Exhibit, in the section entitled "Addition of Previously Approved ACM and ICM Project
14 Assets to Rate Base", in Section 2.7.
- 15 • The City of London's plan to construct major transit and infrastructure improvements
16 continues into 2022. Capital spending directly related these planned transit projects in
17 2022 is projected to be \$7,315,000. The majority of this spending is required under the
18 Public Services Works on Highways Act. This will result in increased investment primarily
19 in Poles and Fixtures, Overhead and Underground Conductors and Devices, Underground
20 Conduit, Transformers and Services (Accounts 1830 – 1855).
- 21 • Capital spending for Developer Works Projects, such as new residential subdivisions and
22 condominiums, commercial connections and overhead line expansions is expected to be
23 \$8,633,000 in 2022. This will result in increased investments primarily in Underground
24 Conductors and Conduit, Transformers, Services and Meters (Accounts 1840 - 1860).
- 25 • Fully-depreciated assets that are budgeted to be removed from the gross asset balance
26 in 2022 amount to \$5,713,400.

1 *General Plant: Variance \$3,053,500*

2 *Variance attributable to Additions: \$5,274,200. Variance attributable to Disposals: (\$2,220,700).*

3 General Plant assets in the 2022 Test Year are projected to be higher than the 2021 Bridge Year
4 amounts by \$3,053,500. Details regarding this variance are explained below:

- 5 • Projected increased investments in Buildings and Fixtures (Account 1908) are the result
6 of planned capital spending related to improvements and renovations of London Hydro
7 main office and operations buildings. This includes office renovations completed to
8 accommodate the changing needs of the workforce, along with updates to outdated
9 fixtures such as flooring, lighting and ventilation. Also included in 2022 planned capital
10 spending is upgrades for environmental mitigation and hardware enhancements to the
11 newly installed fuel system.
- 12 • Investments in Office Furniture and Equipment (Account 1915) is attributable to planned
13 spending for new substation security systems. This project will begin in 2021 and will
14 continue into 2022 as additional substations are addressed.
- 15 • Investments in Transportation Equipment (Account 1930) are expected to increase by
16 \$483,700, primarily due to the purchase of additional fleet vehicles to replace older units.
17 It is planned that London Hydro will replace four trailers, ten pickup trucks and three vans
18 in 2022. The old units being replaced are at the end of their useful life and are expected
19 to be sold within the year.
- 20 • Projected increased investments in Communication Equipment (Account 1955) is
21 primarily attributable to enhancements to London Hydro's Advanced Metering
22 Infrastructure (AMI). In 2022, London Hydro plans to continue enhancements to the AMI
23 Network to address capacity concerns in highly congested sites.
- 24 • Projected increased investments in System Supervisory Equipment (Account 1980) is
25 primarily driven by planned System Service and System Access investments related to
26 increased installation of SCADA-controlled switches, reclosers and RTU's.
- 27 • Fully-depreciated assets that are scheduled to be removed from the gross asset balance
28 in 2022 amount to \$2,220,700.

1 *Information System: Variance \$4,493,809*

2 *Variance attributable to Additions: \$5,555,000. Variance attributable to Transfer from ACM: \$2,591,309.*

3 *Variance attributable to Disposals: (\$3,652,500).*

4 Information Systems assets in the 2022 Test Year are projected to be higher than the 2021
5 Bridge amounts by \$4,493,809. Details regarding this variance are explained below:

- 6 • Planned additions to Software in 2022 are \$4,687,000, and include the following major
7 software projects that are planned to go live in the year:
 - 8 ○ HRIS Enhancements
 - 9 ○ Cyber Security and Infrastructure Enhancements
 - 10 ○ Mobile Platform Consolidation
 - 11 ○ Improvements to customer engagement systems such as Trickl, Property
12 Management Portal, MyLondonHydro and IDC
 - 13 ○ Providing a single platform to consolidate Mobile Applications and Web
14 Applications
- 15 • Fully-depreciated software with an original cost of \$3,317,200 will be disposed of in the
16 year.
- 17 • Also included in the increase to Gross Assets is the transfer of \$2,591,309 for the JD
18 Edwards Upgrade, to be transferred from the 1508 Advance Capital Module Accounts into
19 Gross Assets in 2022. This project was submitted and approved in the 2017 Cost of
20 Service Rate Application, through an Advanced Capital Model. More information on this
21 can be found within this Exhibit, in Section 2.7, entitled “Addition of Previously Approved
22 ACM and ICM Project Assets to Rate Base”.
- 23 • Planned additions to Hardware in 2022 are \$868,000 with fully-depreciated hardware
24 disposals of \$335,300.

25 *Contributions and Grants: Variance (\$4,558,000)*

26 In 2021, it is anticipated that London Hydro will collect \$4,558,000 in contributed capital from
27 developer-driven projects related to residential condominium and subdivision developments,
28 secondary service upgrades and commercial connections.

1 Change in Accumulated Depreciation

2 Accumulated depreciation increased by \$44,839,731 between the 2017 OEB Approved Year and
3 the 2022 Test Year. See Table 2-17 below for annual accumulated depreciation balances, broken
4 down by major plant account. Fluctuations by category are as follows:

- 5 • \$42,352,648 increase to accumulated depreciation on Distribution Plant assets
- 6 • \$6,719,943 increase to accumulated depreciation on General Plant assets
- 7 • \$3,708,449 increase to accumulated depreciation on Information Systems assets
- 8 • \$7,941,310 increase (credit) to accumulated depreciation on Contributed Capital

9 Further discussion regarding depreciation and estimated useful lives can be found within Exhibit
10 4 of this Rate Application, Section 4.6, 'Depreciation and Amortization Expense'.

11 **Table 2-17 – Accumulated Depreciation Balances 2017 to 2022**

ACCUMULATED DEPRECIATION BALANCES 2017 TO 2022								
	2017 Actual	2017 OEB Approved	2018 Actual	2019 Actual	2020 Actual	2021 Bridge	2022 Test	2017 OEB Approved to 2022 Test
	\$	\$	\$	\$	\$	\$	\$	\$
Distribution Plant								
1609 Capital Contributions Paid	-	-	-	-	-	-	606,042	606,042
1612 Land Rights	254,428	253,914	276,904	301,227	327,699	143,199	103,799	(150,115)
1808 Buildings - Substations	759,228	758,209	773,984	788,976	803,969	819,569	836,269	78,059
1820 /1610 Substation Equipment	7,946,196	7,949,792	8,187,302	8,274,819	8,695,969	9,127,169	9,561,069	1,611,276
1830 Poles, Towers & Fixtures	21,781,279	21,791,117	22,532,700	23,328,181	24,165,987	25,060,387	25,995,187	4,204,070
1835 OH Conductors & Devices	26,092,516	26,111,903	27,148,867	28,238,584	29,391,426	30,660,026	32,009,226	5,897,323
1840 UG Conduit	12,071,589	12,084,175	12,943,451	13,954,107	15,155,895	16,577,695	18,124,595	6,040,420
1845 UG Conductor & Devices	41,663,717	41,659,809	40,927,448	41,174,395	41,804,187	41,093,087	40,582,287	(1,077,522)
1850 Line Transformers	38,846,288	38,861,314	40,630,572	42,471,330	45,143,951	47,993,551	49,482,651	10,621,337
1855 Services (OH & UG)	10,588,322	10,577,320	11,424,394	12,443,873	13,606,018	14,927,418	16,409,718	5,832,398
1860 Meters	13,161,254	13,125,520	14,718,188	16,387,796	18,056,779	19,826,779	21,814,879	8,689,359
	173,164,817	173,173,074	179,563,811	187,363,288	197,151,880	206,228,880	215,525,722	42,352,648
General Plant								
2005 Property Under Finance Lease	-	-	57,974	115,948	173,923	231,923	289,923	289,923
1908 Buildings & Fixtures	10,757,680	10,762,609	11,443,781	12,245,360	11,153,862	11,234,562	11,287,062	524,454
1915 Office Furniture & Equipment	291,514	296,497	329,702	386,690	556,751	605,751	893,251	596,754
1930 Transportation Equipment	7,592,553	7,481,563	8,068,156	8,347,086	8,773,450	8,736,850	9,021,250	1,539,687
1935 Stores Equipment	55,772	180,360	88,960	125,875	164,461	204,161	241,861	61,501
1940 Tools, Shop & Garage Equipment	461,759	466,698	478,179	401,942	426,946	449,346	463,146	(3,553)
1945 Measurement & Testing Equipment	240,859	244,566	363,983	506,362	587,118	746,818	852,818	608,252
1950 Power Operated Equipment	769,135	682,397	693,204	799,706	822,288	909,888	947,088	264,691
1955 Communication Equipment	1,918,256	1,879,697	2,272,317	2,627,300	2,986,478	3,413,978	3,716,178	1,836,481
1960 Miscellaneous Equipment	1,052	1,052	1,557	3,385	10,898	19,798	31,198	30,146
1980 System Supervisory Equipment	1,386,583	1,379,567	1,297,715	1,493,880	1,716,473	2,064,673	2,351,173	971,606
	23,475,164	23,375,004	25,095,527	27,053,533	27,372,647	28,617,747	30,094,947	6,719,943
Information Systems								
1920 Computer - Hardware	868,350	887,525	689,444	485,751	658,089	611,689	941,689	54,164
1611 Computer - Software	10,387,724	10,509,514	9,862,566	10,566,049	10,380,359	10,385,859	14,163,799	3,654,285
	11,256,074	11,397,039	10,552,010	11,051,800	11,038,448	10,997,548	15,105,488	3,708,449
Total Gross Balance before Contributed Capital	207,896,054	207,945,117	215,211,347	225,468,621	235,562,975	245,844,175	260,726,157	52,781,040
1995 /2440 Contributions and Grants	(12,767,134)	(12,750,386)	(14,078,515)	(15,502,844)	(17,080,695)	(18,816,695)	(20,691,695)	(7,941,310)
	195,128,920	195,194,731	201,132,833	209,965,776	218,482,280	227,027,480	240,034,462	44,839,731

1 **Capital Additions Reconciliation to Capital Spending**

2 In order to provide for a more accurate correlation between capital activities and associated
3 explanations, the discussions that follow in this Exhibit (Section 2.5.2) are directed at capital
4 spending rather than capital additions.

5 Capital additions are difficult to discuss at a high level due to the following factors:

- 6 ➤ Changes in work-in-progress;
- 7 ➤ One capital project can be capitalized to many different capital asset accounts. For
8 example, upon completion, one project may be capitalized to various accounts such as
9 Services, Overhead Conductor and Devices, Underground Conductor and Devices, Poles,
10 Towers and Fixtures; and
- 11 ➤ Capital additions differ from capital spending in a given year since only projects that are
12 complete and in service are added to rate base as a capital addition. Projects that are not
13 complete at the end of the year remain in work-in-progress.

14 Capital spending is less complicated as it simply represents the dollars spent in a given year
15 without any adjustment for projects that remain in work-in-progress. Capital spending discussions
16 are based on specific projects rather than on the many fixed asset accounts that projects are
17 allocated to upon completion. In addition, discussing capital spending makes it easier to
18 segregate those expenditures that are a result of developer and customer demand (e.g., the City
19 of London), compared to those that are completed at London Hydro's discretion.

20 Table 2-18 below has been provided to display and reconcile the difference between capital
21 additions and capital spending due to changes in work-in-progress (WIP).

22 **Table 2-18 – Reconciliation of Capital Additions to Capital Spending**

RECONCILIATION OF CAPITAL ADDITIONS TO CAPITAL SPENDING 2017 - 2022							
	2017 Actual	2017 OEB Approved	2018 Actual	2019 Actual	2020 Actual	2021 Bridge	2022 Test
	\$	\$	\$	\$	\$	\$	\$
Net Additions to Fixed Assets	27,316,147	26,999,300	35,716,650	37,777,183	38,546,600	36,777,000	41,742,000
Work-in-progress, beginning of year	(14,165,588)	(14,185,490)	(19,302,691)	(14,200,217)	(15,082,855)	(13,472,332)	(13,422,332)
Work-in-progress, end of year	19,302,691	16,567,490	14,200,217	15,082,855	13,472,332	13,422,332	19,172,332
ACM Transfer from WIP to Deferral Account	-	-	9,849,016	-	-	(1,750,000)	-
	5,137,103	2,382,000	4,746,541	882,638	(1,610,523)	(1,800,000)	5,750,000
Net Capital Spending	32,453,251	29,381,300	40,463,192	38,659,821	36,936,077	34,977,000	47,492,000

2.3 ALLOWANCE FOR WORKING CAPITAL

London Hydro's working capital allowance ("WCA") has been calculated to be \$26,853,504 for the proposed 2022 Test Year and is based on a rate of 7.5%, as seen in Table 2-19 below.

Table 2-19 – Summary of Working Capital Allowance

SUMMARY OF WORKING CAPITAL ALLOWANCE									
	2017 Actual	2017 OEB Approved	2018 Actual	2019 Actual	2020 Actual	2021 Bridge	2022 Test	2017 OEB Approved to 2022 Test	CAGR
	\$	\$	\$	\$	\$	\$	\$	\$	%
Eligible Distribution Expenditure	37,699,259	37,480,541	38,879,376	39,937,045	40,495,943	42,347,740	44,295,600	6,815,059	3.4%
Cost of Power (COP)	373,466,345	413,130,174	356,920,866	368,248,825	433,635,408	465,042,453	313,751,116	(99,379,058)	-5.4%
Total Eligible Distribution Expenditures & COP	411,165,604	450,610,715	395,800,242	408,185,870	474,131,351	507,390,193	358,046,716	(92,563,999)	-4.5%
WCA Rate	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	7.50%	0.00%	
Working Capital Allowance (WCA)	30,837,420	33,795,804	29,685,018	30,613,940	35,559,851	38,054,264	26,853,504	(6,942,300)	-4.5%

On June 3, 2015, the Ontario Energy Board issued a letter regarding "Allowance for Working Capital for Electricity Distribution Rate Applications." In this letter, the Board adopted a new default value for calculating working capital allowance: 7.5% of the sum of the cost of power and operating, maintenance and administration (OM&A) costs. London Hydro has utilized this 7.5% default rate in calculating its WCA.

Actual results for 2017 working capital allowance were lower than the 2017 OEB Approved amount by \$2,958,383 or 8.75%. This is primarily due to lower than planned COP expenses.

The 2022 working capital allowance has decreased \$6,942,300, or 4.5% CAGR, in comparison to the 2017 OEB Approved amounts. This change is primarily a result of a reduction in cost of power expenses of \$99,379,058, partially offset by an increase in eligible distribution expenses of \$6,815,059.

Total eligible distribution expenses used in the calculation of WCA represent OM&A expenditures, cloud services and property taxes as listed in Table 4-1. Additionally, the calculation of the cost of power for the proposed 2022 Test Year can be found in the Chapter 2 Appendices, Appendix 2-ZA or Appendix 2-ZB.

2.4 DISTRIBUTION SYSTEM PLAN

In accordance with the Chapter 2 Filing Requirements, London Hydro is filing its consolidated Distribution System Plan (“DSP”) as a stand-alone and self-sufficient document as Appendix 2-7 of this Exhibit. London Hydro has prepared its DSP in accordance with the OEB’s Filing Requirements For Electricity Distribution Rate Applications – 2021 Edition for 2022 Rate Applications - Chapter 5 Consolidated Distribution System Plan dated June 24, 2021 (the “DSP Filing Requirements”) as part of this Application. The DSP incorporates matters pertaining to asset management, regional planning, and renewable energy generation.

All categories of system investments, including System Renewal, System Access, System Service, and General Plant have been addressed and consolidated in London Hydro’s capital expenditure plan. London Hydro provided historical spending by material capital project in the categories mentioned for 2016 – 2020 Historical Actual, 2021 Bridge and 2022 Test Years.

2.5 CAPITAL EXPENDITURES SUMMARY AND VARIANCE ANALYSIS

Table 2-20 below outlines capital spending for the 2017 OEB Approved Year, 2016-2020 Historical Years, 2021 Bridge Year and the 2022 Test Year. Per Filing Requirement 2.2.2.2, capital expenditures are categorized into one of four DSP investment categories: System Access, System Renewal, System Service and General Plant. This table shows capital expenditures, treatment of contributed capital, as well as additions and deductions from CWIP. Material variances are further discussed below.

Table 2-20 – Capital Spending Summary by DSP Investment Category 2016 – 2022

CAPITAL SPENDING 2016 - 2022 SUMMARY BY OEB CHAPTER 5 INVESTMENT CATEGORY								
Annual Spending Summary by Investment Category	2016 Actual	2017 Actual	2017 OEB Approved	2018 Actual	2019 Actual	2020 Actual	2021 Bridge	2022 Test
	\$	\$	\$	\$	\$	\$	\$	\$
System Access	10,076,060	13,725,280	8,412,400	10,626,278	11,406,027	12,745,761	13,923,000	17,987,000
System Renewal	15,462,606	14,141,444	14,277,500	18,345,153	21,458,115	18,826,473	17,504,000	17,493,000
System Service	587,091	1,135,408	892,500	784,306	674,582	1,053,686	1,095,000	1,135,000
General Plant	10,266,475	9,447,863	8,899,900	14,069,670	10,303,659	9,806,858	9,589,000	15,935,000
Other	1,055,376	(790,875)	-	1,433,052	(824,043)	1,342,093	(600,000)	(500,000)
	37,447,608	37,659,121	32,482,300	45,258,459	43,018,340	43,774,870	41,511,000	52,050,000
Capital Contributions	(3,313,477)	(5,205,870)	(3,101,000)	(4,795,268)	(4,358,519)	(6,838,793)	(6,534,000)	(4,558,000)
Total	34,134,131	32,453,251	29,381,300	40,463,192	38,659,821	36,936,077	34,977,000	47,492,000
Work-in-progress, beginning of year	12,128,580	14,165,588	14,185,490	19,302,691	14,200,217	15,082,855	13,472,332	13,422,332
Work-in-progress, end of year	(14,165,588)	(19,302,691)	(16,567,490)	(14,200,217)	(15,082,855)	(13,472,332)	(13,422,332)	(19,172,332)
ACM Transfer from WIP to Deferral Account	-	-	-	(9,849,016)	-	-	1,750,000	-
Net Additions to Fixed Assets	32,097,123	27,316,147	26,999,300	35,716,650	37,777,183	38,546,600	36,777,000	41,742,000

The table above corresponds to Appendix 2-AB: Capital Expenditure Summary from Chapter 5 Consolidated Distribution System Plan Filing Requirements”.

The ‘Other’ line above contains “Inventory held for capital projects”, which represents spending on capital-related inventory items that have been purchased but not yet assigned to a specific capital job, and therefore remain in Work-In-Progress at the end of each year. For purposes of Appendix 2-AB, this line is included within the System Renewal Investment Category.

Table 2-24 (Section 2.5.2) below also provides capital spending for the period of 2016-2022, but it is shown at a more detailed level than the overall Investment Categories in Table 2-20 above.

2.5.1 A Comparison between 2017 and 2022

Proposed capital spending for the 2022 Test Year is \$18,110,700 or 10.1% CAGR higher compared to 2017 OEB Approved amount, as can be seen in Table 2-21 below.

Table 2-21 – Capital Spending by Investment Category (2017 OEB Approved vs. 2022 Test Year)

CAPITAL SPENDING 2016 - 2022 SUMMARY BY OEB CHAPTER 5 INVESTMENT CATEGORY				
Annual Spending Summary by Investment Category	2017 OEB Approved	2022 Test	2017 OEB Approved to 2022 Test	CAGR
	\$	\$	\$	%
System Access	8,412,400	17,987,000	9,574,600	16.4%
System Renewal	14,277,500	17,493,000	3,215,500	4.1%
System Service	892,500	1,135,000	242,500	4.9%
General Plant	8,899,900	15,935,000	7,035,100	12.4%
Other	-	(500,000)	(500,000)	
	32,482,300	52,050,000	19,567,700	9.9%
Capital Contributions	(3,101,000)	(4,558,000)	(1,457,000)	8.0%
Total	29,381,300	47,492,000	18,110,700	10.1%

This increase can be broken down into 3 primary cost drivers: (1) increase in System Access spending, (2) CIS Refresh, and (3) Other factors. These drivers are identified in Table 2-22:

Table 2-22 – Analysis of Capital Spending Variance (2017 OEB Approved vs. 2022 Test Year)

ANALYSIS OF CAPITAL SPENDING 2017 OEB APPROVED vs. 2022 TEST YEAR	
Drivers	Amount (\$)
2017 OEB Approved Capital Spending	29,381,300
Drivers of Increase:	
Increase in (Non-Discretionary) System Access Spending	8,117,600
CIS Refresh	6,500,000
Other	3,493,100
Total Increase	<u>18,110,700</u>
2022 Test Year Capital Spending	47,492,000

1 These drivers are explained further below:

- 2
- 3 • **Increase in System Access spending:** spending in this area is highly non-discretionary,
4 due to its nature (customer and developer-driven, City of London related projects). A
5 breakdown of this increase is shown in Table 2-23 below:

6 **Table 2-23 – System Access Spending (2017 OEB Approved vs. 2022 Test Year)**

LONDON HYDRO CAPITAL SPENDING 2017 OEB APPROVED vs. 2022 TEST YEAR - SYSTEM ACCESS			
Annual Spending Details by Investment Category	2017 OEB Approved	2022 Test	2017 OEB Approved to 2022 Test
	\$	\$	\$
System Access			
City Road Authority Relocates	2,241,200	340,000	(1,901,200)
Transit Relocates	-	7,315,000	7,315,000
Developer Expansions & Relocations	340,900	1,231,900	891,000
Residential Secondary Service Upgrade	355,000	491,000	136,000
Single Family Residential Underground	1,090,200	2,759,400	1,669,200
Multi-Family Residential Underground	783,000	1,461,700	678,700
Commercial Distribution Services	1,935,900	2,689,000	753,100
Metering and installations	663,200	970,000	306,800
Primary metering	354,000	229,000	(125,000)
AMI Communications Renewal	649,000	500,000	(149,000)
Total System Access before Capital Contributions	8,412,400	17,987,000	9,574,600
Capital contributions	(3,101,000)	(4,558,000)	(1,457,000)
Total	5,311,400	13,429,000	8,117,600

6

- 7
- 8 ○ \$7,315,000 of this pertains to **Transit Relocates**: In recent years and continuing
9 into the next five years, there have been significant relocations to accommodate
10 City of London and London Transit initiated projects. The City of London's bus
11 rapid transit ("BRT") adds curbside bus-only lanes throughout the city and
12 transportation improvements to ease congestion and improve safety and
13 efficiency. The primary goal of the BRT project is to develop a more sustainable
14 transportation system for London with significantly improved public transit services
15 and improved safety and efficiency.
 - 16 ○ **City Road Authority Relocates** have decreased by \$1,901,200, as an offset to
the Transit Relocates mentioned above. As the City has been increasing their

1 efforts on their BRT projects, it has resulted in a decrease to their regular, ongoing
2 relocations in other areas of the city.

- 3 ○ \$4,128,000 of this pertains to **Developer-driven projects** (sum of the following:
4 Developer Expansions & Relocations, Residential Secondary Service Upgrade,
5 Single Family and Multi-Family Residential Underground, and Commercial
6 Distribution Services): The population within the City of London continues to grow
7 and is resulting in a surge of new homes and subdivisions. Between 2001 and
8 2017, growth in the London region averaged just under 1%. Between 2018 and
9 2019, the population in London grew by 2.3% (2017 to 2018 2.4%) which is a
10 significant increase and resulted in record levels of new construction. Although the
11 London region has seen an increase in population growth, it is important to note
12 that customer growth has remained constant in the range of 1% per annum. While
13 the population in London has been increasing, so too has the increase in multi-
14 residential connections.

- 15 ● **CIS Refresh:** London Hydro is planning to undergo a CIS/CRM (Customer Information
16 System / Customer Relationship Management) transformation program to address SAP
17 system obsolescence and to improve the customer experience, operational efficiencies
18 and employee engagement.

- 19 ○ The current SAP system was implemented in 2009.
20 ○ In addition to mitigating the technology currency risks of the current solution, this
21 solution enables a number of benefits for London Hydro:
22 ■ *Enhance digital innovation:* A legacy SAP system would inhibit London
23 Hydro's ability to leverage improvements to drive innovation or would
24 require London Hydro to build a complex environment around the legacy
25 SAP instance to support innovations, which will be avoided by a new
26 system
27 ■ *Provide scalability and flexibility:* Ability to support current needs today and
28 tomorrow by continually enhancing service capabilities to meet customer
29 needs

- 1 ▪ *Enhance customer engagement:* Accurate, real-time consumption data to
2 meet customer demands with increasing analytical capabilities and
3 respond to increasing customer demands for personalized, real time data
4 ○ This large, multi-year project is expected take place between 2021 – 2023, with a
5 go-live date in 2023. The project is separately identified due to its scale and
6 infrequency. Spending on this project is projected to be \$6,500,000 in 2022, and
7 is discussed in more detail further within this Exhibit, in Section 2.6, “Policy Options
8 for the Funding of Capital”.
- 9 • **Other Factors:** these are specific to the System Renewal, System Service, General Plant,
10 and “Other” categories, and include factors such as inflation, and spending on planned
11 asset replacements. These are offset by any reductions in capital spending categories
12 from the 2017 OEB Approved amounts.
- 13 ○ **System Renewal:** London Hydro has made significant investments in order to
14 increase the available capacity of our 27.6 kV distribution system. These
15 investments have resulted in desirable loading levels on our feeders while also
16 improving our reliability performance by reducing the average number of
17 customers that are connected to a feeder. By maintaining proper loading levels on
18 our feeder circuits, we ensure that we have sufficient flexibility to accommodate
19 the majority of operating conditions that occur during peak and non-peak load
20 periods, as well as to handle the natural system load growth. Investments in this
21 category involve replacing and/or refurbishing system assets to extend the original
22 service life of the assets, and the replacement of end-of-use assets and assets in
23 deteriorating condition (including high failure risk assets and/or asset failure).

2.5.2 Capital Spending by Investment Category

Table 2-24 below provides capital spending for the period of 2016-2022, at a more detailed level than the overall Investment Categories in Table 2-20 above. This table corresponds to the “Capital Projects Table”, in accordance with Appendix 2-AA of the Filing Requirements.

Table 2-24 – Capital Spending Details by Investment Category 2016 – 2022

CAPITAL SPENDING DETAILS BY OEB CHAPTER 5 INVESTMENT CATEGORY								
Annual Spending Details by Investment Category	2016 Actual	2017 Actual	2017 OEB Approved	2018 Actual	2019 Actual	2020 Actual	2021 Bridge	2022 Test
	\$	\$	\$	\$	\$	\$	\$	\$
System Access								
City Works Projects	1,646,458	1,841,434	2,241,200	837,836	281,636	1,261,346	3,676,000	7,655,000
Developer Works Projects	6,143,592	10,069,571	4,505,000	8,669,854	9,824,439	9,855,787	8,505,000	8,633,000
Meters & Devices	2,286,011	1,814,275	1,666,200	1,118,588	1,299,952	1,628,628	1,742,000	1,699,000
Total System Access	10,076,060	13,725,280	8,412,400	10,626,278	11,406,027	12,745,761	13,923,000	17,987,000
System Renewal								
Substation Rebuilds	83,719	11,629	45,000	118,687	136,761	116,271	345,000	15,000
Subdivision Rebuilds	5,356,815	4,482,603	4,285,900	5,410,852	4,395,224	8,978,678	7,478,000	8,272,000
Main Feeders	3,824,601	3,363,841	3,365,400	5,900,069	7,982,948	3,162,644	2,021,000	1,785,000
Downtown Core Supply	2,064,070	2,277,332	2,064,100	3,485,064	5,100,838	1,990,393	2,560,000	2,131,000
Overhead Line Work	4,133,401	4,006,040	4,517,100	3,430,481	3,842,344	4,578,487	5,100,000	5,290,000
Total System Renewal	15,462,606	14,141,444	14,277,500	18,345,153	21,458,115	18,826,473	17,504,000	17,493,000
System Service								
Substation Rebuilds	66,474	113,017	79,600	901	-	-	-	-
Subdivision Rebuilds	55,108	72,753	90,000	124,095	67,376	70,864	120,000	115,000
Main Feeders	1,139	2,498	-	-	-	498	-	-
SCADA and Control Room	464,370	947,140	722,900	659,310	607,207	982,323	975,000	1,020,000
Total System Service	587,091	1,135,408	892,500	784,306	674,582	1,053,686	1,095,000	1,135,000
General Plant								
Meters & Devices	40	-	-	-	-	-	-	-
Capital Contribution to Transformer Station	1,826,921	1,875,993	1,882,000	1,938,202	-	-	(1,750,000)	-
Land, Buildings and Equipment	1,896,862	1,353,122	1,424,900	4,116,717	2,558,402	1,827,944	4,071,000	2,781,000
Vehicles & Major Equipment	1,118,781	1,107,047	1,095,900	1,026,456	1,492,724	1,470,038	1,445,000	1,450,000
Hardware / Software	780,206	1,041,038	732,900	777,302	396,284	1,028,289	1,020,000	829,000
Application Development	4,643,665	3,531,571	3,264,200	4,158,776	5,856,249	5,480,587	4,303,000	4,375,000
CIS Refresh	-	-	-	-	-	-	500,000	6,500,000
JD Edwards	-	539,092	500,000	2,052,217	-	-	-	-
Total General Plant	10,266,475	9,447,863	8,899,900	14,069,670	10,303,659	9,806,858	9,589,000	15,935,000
Other								
Inventory Held for Capital Projects	1,055,376	(790,875)	-	1,433,052	(824,043)	1,342,093	(600,000)	(500,000)
Total Other	1,055,376	(790,875)	-	1,433,052	(824,043)	1,342,093	(600,000)	(500,000)
	37,447,608	37,659,121	32,482,300	45,258,459	43,018,340	43,774,870	41,511,000	52,050,000
Capital contributions	(3,313,477)	(5,205,870)	(3,101,000)	(4,795,268)	(4,358,519)	(6,838,793)	(6,534,000)	(4,558,000)
Total	34,134,131	32,453,251	29,381,300	40,463,192	38,659,821	36,936,077	34,977,000	47,492,000

London Hydro’s capital expenditures will be discussed at the Investment Category Level. Material variances will be discussed further.

1 **Investment Categories**

2 Per Filing Requirement 2.2.2.2, capital expenditures are categorized into one of four DSP
3 investment categories: System Access, System Renewal, System Service and General Plant.
4 Explanations of these categories and examples of spending within them are below.

5 *System Access*

6 System Access investments are modifications (including asset relocation) to the distribution
7 system that a distributor is obligated to perform to provide a customer (including a generator
8 customer) or group of customers with access to electricity services via the distribution system.
9 Spending is driven by customer connection needs, third-party infrastructure needs requiring
10 mandatory utility relocation, and mandated revenue metering and service obligations.

11 System Access investments include three Major Project groupings:

- 12 • **City Works** projects are completed to accommodate work conducted by the City of
13 London. Typically, these projects involve the relocation of London Hydro infrastructure at
14 the request of the Road Authority (City of London) to accommodate planned modifications
15 to the roadway. Therefore, these projects require London Hydro to relocate or replace
16 assets. The City of London has a number of multi-year plans that have been created to
17 meet the City's growing transportation needs and new developments. The terms and
18 conditions under which these relocations occur are specified in the Public Service Works
19 on Highways Act enacted by the Provincial Government. A portion of London Hydro costs
20 are recovered from the City in accordance with road authority regulations.
- 21 • **Developer Works** projects include developer-driven system expansions to supply new
22 developments and the installation of single family, and multi-housing (primarily townhomes
23 and condominiums) residential underground distribution systems, and commercial
24 connections. These projects may involve expansions and relocations as needed to
25 accommodate these developments. Market conditions can create fluctuations in these
26 expenditures from year-to-year as a result of demand. A portion of London Hydro costs
27 are recovered from the developers in accordance with Section 3 and Appendix B of the
28 DSC.

- 1 • **Meters and Devices** projects within this category are those necessary to accommodate
2 customer growth. Capital spending for Meters & Devices is associated with the installation
3 of Measurement Canada approved electricity revenue metering devices and
4 improvements to the Advanced Metering Infrastructure (AMI) within London. Ongoing
5 spending each year is incurred as new services are created and old services are replaced
6 or removed.

7 Spending within this investment category is non-discretionary to London Hydro.

8 *System Renewal*

9 System Renewal investments involve replacing and/or refurbishing system assets to extend the
10 original service life of the assets and thereby maintain the ability of the distribution system to
11 provide customers with electricity services. This includes the replacement of end-of-use assets,
12 and assets in deteriorating condition (including high failure risk assets and/or asset failure).

13 System Renewal investments include five Major Project groupings:

- 14 • **Substation Rebuilds** are projects that extend the life of existing substations by replacing
15 assets that have been assessed as being in poor condition or are technically obsolete. In
16 some cases, the components replaced are relatively minor, such as battery banks or RTUs
17 (remote terminal units), and in other cases, it could be something as major as a power
18 transformer replacement.
- 19 • **Subdivision Rebuilds** include projects that replace assets that have been assessed as
20 being in poor condition, often contributing to poor reliability in the area. The scope of these
21 projects typically includes replacement of primary cables, switchgear, transformers and
22 secondary bus conductors (but not individual services to customers). The central focus of
23 all these projects is to maintain reliability and safety of the distribution grid in a manner
24 that is consistent with the long-term planning strategies.
- 25 • **Main Feeders** projects are associated with investments to replace existing main feeders
26 and supporting civil structures within the city that are identified as being in poor condition,
27 or require an increase in capacity to improve reliability. The scope of these projects could
28 include re-conductoring or completely rebuilding a section of a feeder, replacement of

1 station egress cables, or replacement of supporting structures such as vaults, manholes,
2 or ducts.

- 3 • **Downtown Core Supply** projects are those that are unique to the supply to the downtown
4 area of London. This area is supplied by an underground system using vaults, ducts and
5 manholes. The scope of these projects includes replacement of the civil structures (vaults,
6 ducts, manholes) and the electrical system (cables, transformers, switches, and protection
7 systems).
- 8 • **Overhead Line Work** includes projects that address refurbishment of the aging
9 distribution system and replace overhead distribution assets in poor condition. These
10 overhead lines are not a part of the existing main feeders for the City of London. These
11 projects could be replacement of specific assets (such as connectors, arrestors or poles)
12 or complete line rebuilds, which could include upgrading to a higher voltage. London
13 Hydro will continue to enhance system protection with respect to outages caused by
14 lightning, foreign contacts and other defective components by using strategies such as
15 additional insulation, additional lightning arresters and protective cover-up on new and
16 existing feeders that have been identified as poor performers. This work will be done in a
17 prioritized manner.

18 Spending within this investment category is primarily non-discretionary to London Hydro, although
19 the timing and priority of projects is at times discretionary. Delays or postponement in this
20 category leads to a change from partially discretionary to non-discretionary.

21 *System Service*

22 System Service investments are modifications to a distributor's distribution system to ensure the
23 distribution system continues to meet operational objectives (such as reliability, grid flexibility and
24 DER integration), while addressing anticipated future customer electricity service requirements.
25 Examples include operational technologies and grid modernization. Projects in this category are
26 driven by the distributor's expectations that evolving customer use of the system may create
27 system capacity constraints or otherwise adversely impact operations and the delivery of quality
28 distribution services.

1 System Service investments have been grouped into three Major Project groupings, which are
2 similar to System Renewal groupings but with different drivers:

- 3 • **Substation Rebuilds** are projects that improve the overall performance of the substation
4 (safety, reliability, quality, efficiency), such as upgrades to protection and control systems
5 (relays, radios, etc.).
- 6 • **Subdivision Rebuilds** include projects that improve the overall performance of the
7 subdivision (safety, reliability, quality, efficiency), such as installing a backup feeder
8 connection (to create a loop supply) or fault indicators (to quickly locate outages).
- 9 • **SCADA and Control Room** projects improve the overall performance of the distribution
10 system, such as new recloser installations, RTU upgrades (those not in substations),
11 SCADA related upgrades (including new communication systems, cyber security
12 enhancements), and power quality upgrades (including new equipment to monitor power
13 quality). Capital spending is associated with the installation of automation-enabling
14 equipment such as reclosers, RTU's, fault indicators, line status indicators and central
15 SCADA systems to enhance safety and improve reliability.

16 Spending within this investment category is fairly discretionary to London Hydro, in terms of both
17 initiating a project and determining the priority and timing of project-related expenditures.

18 *General Plant*

19 General Plant investments are modifications, replacements or additions to a distributor's assets
20 that are not part of its distribution system including land and buildings, tools and equipment, rolling
21 stock and electronic devices and software used to support day to day business and operations
22 activities. They include investments to meet the facilities, fleet, office systems and IT needs of
23 London Hydro.

24 General Plant investments projects have been grouped into the following Major Project groupings:

- 25 • **Vehicles & Major Equipment** are typically the replacement or addition of new vehicles
26 or major pieces of equipment such as backhoes. These assets are replaced when they
27 become obsolete, unreliable or too costly to repair. New assets are added as the workforce

1 grows. Capital spending includes purchases of small and large fleet vehicles, trailers and
2 power operated equipment used to support London Hydro's operations.

3 • **Land, Buildings & Equipment** include the following sub-categories:

4 ○ **Operating Equipment** includes tools and devices used by the workforce to build
5 and maintain London Hydro assets. Examples include specialty tools, test
6 equipment or large material items, such as outdoor transformer storage racks or
7 specialty ergonomic battery-operated tools, required by the various Operations
8 Departments to perform their duties. These assets are replaced when they become
9 obsolete, unreliable or too costly to repair. As technology improves and tools and
10 testing methods are required to change, enhanced testing equipment and tools are
11 needed to increase efficiency, improve ergonomics and help staff provide service
12 to our customers more quickly.

13 ○ **Office Furniture & Equipment** includes assets used by the office workforce to
14 manage, monitor, design, and maintain London Hydro assets, and includes items
15 such as workstations, cubicles, desks, chairs, and building security devices such
16 as card access equipment and cameras. These assets are replaced when they
17 become obsolete, unreliable or too costly to repair. New assets are added as the
18 workforce grows and to improve safety through more ergonomic workstations.

19 ○ **Buildings & Fixtures** refers to the main office buildings, operations buildings, and
20 substation buildings, along with their associated equipment such as HVAC,
21 plumbing, and electrical. Office renovations are completed to accommodate the
22 changing needs of the workforce, while updating dated fixtures such as flooring,
23 lighting and ventilation.

24 • **Information Technology (IT)** includes projects to upgrade computer hardware and
25 software systems to replace aging infrastructure, accommodate regulatory changes, and
26 provide enhanced services to internal customers (other London Hydro departments) and
27 external customers.

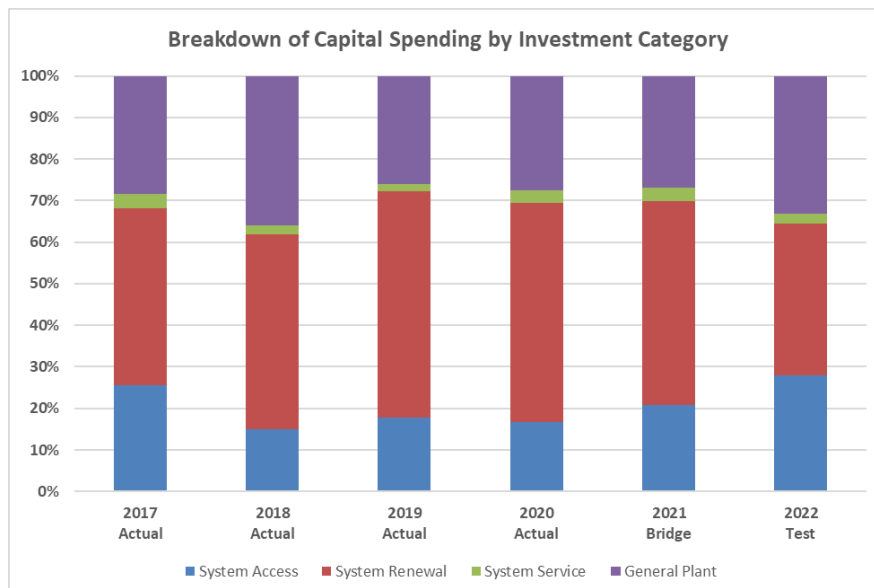
28 ○ Capital expenditures for **Hardware and Software** include the purchase of
29 Information Technology assets such as servers & storage, network development,
30 laptops or desktops, and general-use hardware and software to support London
31 Hydro's IT infrastructure.

- 1 ○ Capital spending for **Application Development** involves the development and
2 implementation of new software systems and enhancements to existing systems
3 to meet the needs of London Hydro’s current and evolving information technology
4 environment and regulatory requirements.
- 5 ○ Capital spending for **CIS Refresh** and **JD Edwards** have been discussed in
6 Sections 2.6 and 2.7 of this Exhibit, respectively.
- 7 ● **Capital Contributions to Transformer Station** are negotiated payments to Hydro One
8 for the rebuilt Nelson Transformer Station. This amount was previously submitted in the
9 2017 Cost of Service Rate Application, through an approved Advanced Capital Model.
10 More information on this can be found within this Exhibit, in Section 2.7, entitled “Addition
11 of Previously Approved ACM and ICM Project Assets to Rate Base”.

12 The majority of spending within this investment category is discretionary to London Hydro, with
13 the exception of the Capital Contributions to Transformer Station.

14 Table 2-25 below shows the percentage breakdown of London Hydro’s capital spending for the
15 2017-2020 Historical Years, 2021 Bridge Year and the 2022 Test Year. The overwhelming
16 majority of London Hydro’s capital spending is consistently within the System Access and System
17 Renewal categories, both of which London Hydro has little to no discretion regarding spending.

18 **Table 2-25 – Capital Spending Summary 2017 – 2022**



2.5.3 Variance of Year over Year Category Spending

An analysis of year over year trending for historical and projected costs within the DSP categories is as follows.

2017 Actual vs. 2017 OEB Approved

Actual net capital expenditures in 2017 were \$3,071,951 or 9% higher than 2017 OEB Approved as shown in Table 2-26 below.

Table 2-26 – 2017 Actual vs. 2017 OEB Approved Capital Expenditure Variance

CAPITAL SPENDING VARIANCE ANALYSIS 2017 ACTUALS VS 2017 OEB APPROVED				
Annual Spending Summary by Investment Category	2017 Actual	2017 OEB Approved	Variance	Variance
	\$	\$	\$	%
System Access	13,725,280	8,412,400	5,312,880	39%
System Renewal	14,141,444	14,277,500	(136,056)	-1%
System Service	1,135,408	892,500	242,908	21%
General Plant	9,447,863	8,899,900	547,963	6%
Other	(790,875)	-	(790,875)	100%
	37,659,121	32,482,300	5,176,821	14%
Capital Contributions	(5,205,870)	(3,101,000)	(2,104,870)	40%
Total	32,453,251	29,381,300	3,071,951	9%

System Access

System Access net capital expenditures were \$5,312,880 or 39% higher than 2017 OEB Approved as shown in Table 2-27 below.

Table 2-27 – 2017 Actual vs. 2017 OEB Approved Capital Expenditure Variance – System Access

CAPITAL SPENDING VARIANCE ANALYSIS 2017 ACTUALS VS 2017 OEB APPROVED				
Annual Spending Details by Investment Category	2017 Actual	2017 OEB Approved	Variance	Variance
	\$	\$	\$	%
System Access				
City Works Projects	1,841,434	2,241,200	(399,766)	-22%
Developer Works Projects	10,069,571	4,505,000	5,564,571	55%
Meters & Devices	1,814,275	1,666,200	148,075	8%
Total System Access	13,725,280	8,412,400	5,312,880	39%

1 Details regarding this variance are explained below:

- 2 • Decreased spending for City Works Projects – Spending in 2017 was \$399,766 lower
- 3 than budgeted due to reduced City-executed road modifications compared to projection.
- 4 • Increased spending for Developer Works Projects – In 2017, Developer Works Project
- 5 spending was \$5,564,571 higher than budgeted due to increased residential real estate
- 6 demand in London, Ontario. The increase in demand began to grow in 2016, after the
- 7 budget for 2017 was prepared.

8 *System Renewal*

9 Actual System Renewal spending levels in 2017 were in line with 2017 OEB Approved levels.

10 *System Service*

11 Actual System Service spending levels in 2017 were in line with 2017 OEB Approved levels.

12 *General Plant*

13 General Plant net capital expenditures were \$547,963 or 6% higher than 2017 OEB Approved as
14 shown in Table 2-28 below.

15 **Table 2-28 – 2017 Actual vs. 2017 OEB Approved Capital Expenditure Variance – General Plant**

CAPITAL SPENDING VARIANCE ANALYSIS				
2017 ACTUALS VS 2017 OEB APPROVED				
Annual Spending	2017	2017 OEB		
Details by Investment Category	Actual	Approved	Variance	Variance
	\$	\$	\$	%
General Plant				
Capital Contribution to Transformer Station	1,875,993	1,882,000	(6,007)	0%
Land, Buildings and Equipment	1,353,122	1,424,900	(71,778)	-5%
Vehicles & Major Equipment	1,107,047	1,095,900	11,147	1%
Hardware / Software	1,041,038	732,900	308,138	30%
Application Development	3,531,571	3,264,200	267,371	8%
JD Edwards	539,092	500,000	39,092	7%
Total General Plant	9,447,863	8,899,900	547,963	6%

16
17 Details regarding this variance are explained below:

- 18 • Increased spending for Hardware / Software – Capital spending in 2017 was \$308,138
- 19 higher than the OEB Approved amount due to unplanned spending required to improve
- 20 the reliability and compliance of London Hydro's data backup and disaster recovery
- 21 capabilities.

- 1 • Increased spending for Application Development – Capital spending in 2017 was
2 \$267,371 higher than the OEB Approved amount due to increased spending on two
3 award-winning customer engagement applications: Builder’s Portal and Property
4 Management Portal.

5 *Capital Contributions*

6 In 2017, London Hydro received Capital Contributions in the amount of \$5,205,870, which is
7 \$2,104,870 higher than the 2017 OEB Approved amounts. All contributions received pertain to
8 System Access projects.

1 **2017 Actual vs. 2018 Actual**

2 2018 Actual net capital expenditures were \$8,009,941 or 25% higher than 2017 Actuals as shown
3 in Table 2-29 below.

4 **Table 2-29 – 2017 Actual vs. 2018 Actual Capital Expenditure Variance**

CAPITAL SPENDING VARIANCE ANALYSIS 2017 ACTUALS VS 2018 ACTUALS				
Annual Spending	2017	2018		
Summary by Investment Category	Actual	Actual	Variance	Variance
	\$	\$	\$	%
System Access	13,725,280	10,626,278	(3,099,002)	-23%
System Renewal	14,141,444	18,345,153	4,203,708	30%
System Service	1,135,408	784,306	(351,102)	-31%
General Plant	9,447,863	14,069,670	4,621,807	49%
Other	(790,875)	1,433,052	2,223,927	-281%
	<u>37,659,121</u>	<u>45,258,459</u>	<u>7,599,338</u>	<u>20%</u>
Capital Contributions	(5,205,870)	(4,795,268)	410,602	-8%
Total	32,453,251	40,463,192	8,009,941	25%

5
6 *System Access*

7 2018 System Access net capital expenditures were \$3,099,002 or 23% lower than 2017 as shown
8 in Table 2-30 below.

9 **Table 2-30 – 2017 Actual vs. 2018 Actual Capital Expenditure Variance – System Access**

CAPITAL SPENDING VARIANCE ANALYSIS 2017 ACTUALS VS 2018 ACTUALS				
Annual Spending	2017	2018		
Details by Investment Category	Actual	Actual	Variance	Variance
	\$	\$	\$	%
System Access				
City Works Projects	1,841,434	837,836	(1,003,597)	-55%
Developer Works Projects	10,069,571	8,669,854	(1,399,717)	-14%
Meters & Devices	1,814,275	1,118,588	(695,688)	-38%
Total System Access	13,725,280	10,626,278	(3,099,002)	-23%

10
11 Details regarding this variance are explained below:

- 12 • Decreased spending for City Works Projects – Spending in 2018 was \$1,003,597 lower
13 than 2017 due to City-executed road modifications deferred by the City compared to the
14 previous year. During 2018, the City of London started a major rebuild of Dundas Street,
15 near the downtown core, resulting in fewer modifications to other roadways throughout

1 the city. This major project, Dundas Place, is described in detail in the DSP, in Section
2 3.2b – Historical Variances by Category.

- 3 • Decreased spending for Developer Works Projects – In 2018, Developer Works Project
4 spending was \$1,399,717 lower than 2017 due to decreased residential real estate
5 demand and commercial connections in London, Ontario.
- 6 • Decreased spending for Meters & Devices – Capital spending in 2018 was \$695,688
7 lower than 2017. This variance is attributable to reduced spending for the AMI
8 Communication Renewal project as well as reduced spending for new electric meter
9 purchases/installations, which is directly correlated to the reduction in Developer Works
10 Project spending.

11 *System Renewal*

12 2018 System Renewal net capital expenditures were \$4,203,708 or 30% higher than 2017 as
13 shown in Table 2-31 below.

14 **Table 2-31 – 2017 Actual vs. 2018 Actual Capital Expenditure Variance – System Renewal**

CAPITAL SPENDING VARIANCE ANALYSIS				
2017 ACTUALS VS 2018 ACTUALS				
Annual Spending	2017	2018		
Details by Investment Category	Actual	Actual	Variance	Variance
	\$	\$	\$	%
System Renewal				
Substation Rebuilds	11,629	118,687	107,058	921%
Subdivision Rebuilds	4,482,603	5,410,852	928,249	21%
Main Feeders	3,363,841	5,900,069	2,536,228	75%
Downtown Core Supply	2,277,332	3,485,064	1,207,732	53%
Overhead Line Work	4,006,040	3,430,481	(575,560)	-14%
Total System Renewal	14,141,444	18,345,153	4,203,708	30%

15
16 Details regarding this variance are explained below:

- 17 • Increased spending for Subdivision Rebuilds – Capital spending in 2018 was \$928,249
18 higher than 2017 as a result of increased scope of conversions and leaking transformer
19 replacement projects, as well as the replacement of a failed automated switch.
- 20 • Increased spending for Main Feeders – Capital spending in 2018 was \$2,536,228 higher
21 than 2017 and is related to an increase in primary feeder cable faults and the City of
22 London's Dundas Place rebuild. Starting in 2018, the City initiated a multi-year project to
23 completely rebuild Dundas Street, from Ridout Street to Wellington Street. As part of the

city's proposal, they placed a moratorium on construction in the area for 10 years. As a result, London Hydro was required to advance its timeline for the planned replacement of aging infrastructure within the area. By coordinating the City's rebuild project with London Hydro's advanced replacement of aging infrastructure, London Hydro was able to avoid costs such as surface restoration, traffic control, and project management while having the ability to install a new, consolidated and efficient system which will serve this section of the city safely and reliably for years to come. This major project, Dundas Place, is described in detail in the DSP, in Section 3.2b – Historical Variances by Category.

- Increased spending for Downtown Core Supply – Capital spending in 2018 was \$1,207,732 higher than 2017 and is related to the City of London's Dundas Place rebuild (see above).
- Decreased spending for Overhead Line Work – In 2018, Overhead Line Work spending was \$575,560 lower than 2017, primarily due to the temporary deferral of some projects in order to focus resources on the rebuild work along Dundas Street.

System Service

2018 System Service net capital expenditures were \$351,102 or 31% lower than 2017 as shown in Table 2-32 below.

Table 2-32 – 2017 Actual vs. 2018 Actual Capital Expenditure Variance – System Service

CAPITAL SPENDING VARIANCE ANALYSIS 2017 ACTUALS VS 2018 ACTUALS				
Annual Spending Details by Investment Category	2017 Actual	2018 Actual	Variance	Variance
	\$	\$	\$	%
System Service				
Substation Rebuilds	113,017	901	(112,116)	-99%
Subdivision Rebuilds	72,753	124,095	51,341	71%
Main Feeders	2,498	-	(2,498)	-100%
SCADA and Control Room	947,140	659,310	(287,830)	-30%
Total System Service	1,135,408	784,306	(351,102)	-31%

Details regarding this variance are explained below:

- Decreased spending for SCADA and Control Room – In 2018, SCADA and Control Room Project spending was \$287,830 lower than 2017 primarily because enhancements to the

1 System Operating Centre display wall were substantially completed in the previous year,
2 and a portion of the Cyber Security upgrade was deferred to 2019.

3 *General Plant*

4 2018 General Plant net capital expenditures were \$4,621,807 or 49% higher than 2017 as shown
5 in Table 2-33 below.

6 **Table 2-33 – 2017 Actual vs. 2018 Actual Capital Expenditure Variance – General Plant**

CAPITAL SPENDING VARIANCE ANALYSIS				
2017 ACTUALS VS 2018 ACTUALS				
Annual Spending	2017	2018	Variance	Variance
Details by Investment Category	Actual	Actual		
	\$	\$	\$	%
General Plant				
Capital Contribution to Transformer Station	1,875,993	1,938,202	62,209	3%
Land, Buildings and Equipment	1,353,122	4,116,717	2,763,595	204%
Vehicles & Major Equipment	1,107,047	1,026,456	(80,591)	-7%
Hardware / Software	1,041,038	777,302	(263,736)	-25%
Application Development	3,531,571	4,158,776	627,205	18%
JD Edwards	539,092	2,052,217	1,513,125	281%
Total General Plant	9,447,863	14,069,670	4,621,807	49%

7
8 Details regarding this variance are explained below:

- 9 • Increased spending for Land, Buildings and Equipment – In 2018, the adoption of IFRS
10 16 “Leases” resulted in the addition of a \$2,318,969 capital lease for the recognition of
11 Property Under Finance Lease (Account 2005). This represents the land on which London
12 Hydro’s main office and operations buildings are located, at 111 Horton Street. The
13 remaining variance is primarily attributable to renovations to London Hydro's Customer
14 Service Department to accommodate the changing needs of the workforce, along with
15 updates to outdated fixtures, such as flooring, lighting, ventilation and ergonomic
16 furniture.
- 17 • Increased spending for Application Development – Capital spending in 2018 was
18 \$627,205 higher than 2017 primarily because of increased spending for AMI-related
19 applications. In 2018, London Hydro completed Operational Data System (ODS) and
20 Regional Network Interface (RNI) upgrades. The RNI system collects smart meter data
21 and stores it within the ODS system. The RNI system was upgraded to reduce the risk of
22 failures and increase system reliability. The ODS system was upgraded to a newer version
23 in order to provide scalability and address technology platform obsolescence.

- 1 • Increased spending for JD Edwards – London Hydro’s financial accounting system, JD
2 Edwards (JDE), was upgraded in 2018. The previous version was at end-of-life and in
3 need of replacement. With the implementation of the latest version of JDE, London Hydro
4 reduced the risks associated with system obsolescence. In addition, with this upgrade,
5 London Hydro was able to automate processes that were previously difficult to
6 incorporate, thereby, increasing efficiency. This project was submitted in the 2017 Cost of
7 Service Rate Application, through an approved Advanced Capital Model. More information
8 on this can be found within this Exhibit, in Section 2.7 entitled “Addition of Previously
9 Approved ACM and ICM Project Assets to Rate Base”.

10 *Capital Contributions*

11 In 2018, London Hydro received Capital Contributions in the amount of \$4,795,268, which is
12 \$410,602 lower than in 2017. All contributions received pertain to System Access projects.

1 **2018 Actual vs. 2019 Actual**

2 2019 Actual net capital expenditures were \$1,803,371 or 4% lower than 2018 Actuals as shown
3 in Table 2-34 below.

4 **Table 2-34 – 2018 Actual vs. 2019 Actual Capital Expenditure Variance**

CAPITAL SPENDING VARIANCE ANALYSIS				
2018 ACTUALS VS 2019 ACTUALS				
Annual Spending	2018	2019		
Summary by Investment Category	Actual	Actual	Variance	Variance
	\$	\$	\$	%
System Access	10,626,278	11,406,027	779,748	7%
System Renewal	18,345,153	21,458,115	3,112,963	17%
System Service	784,306	674,582	(109,724)	-14%
General Plant	14,069,670	10,303,659	(3,766,012)	-27%
Other	1,433,052	(824,043)	(2,257,095)	-158%
	<u>45,258,459</u>	<u>43,018,340</u>	<u>(2,240,119)</u>	<u>-5%</u>
Capital Contributions	(4,795,268)	(4,358,519)	436,748	-9%
Total	40,463,192	38,659,821	(1,803,371)	-4%

5
6 *System Access*

7 2019 System Access net capital expenditures were \$779,748 or 7% higher than 2018 as shown
8 in Table 2-35 below.

9 **Table 2-35 – 2018 Actual vs. 2019 Actual Capital Expenditure Variance – System Access**

CAPITAL SPENDING VARIANCE ANALYSIS				
2018 ACTUALS VS 2019 ACTUALS				
Annual Spending	2018	2019		
Details by Investment Category	Actual	Actual	Variance	Variance
	\$	\$	\$	%
System Access				
City Works Projects	837,836	281,636	(556,201)	-66%
Developer Works Projects	8,669,854	9,824,439	1,154,585	13%
Meters & Devices	1,118,588	1,299,952	181,364	16%
Total System Access	10,626,278	11,406,027	779,748	7%

10
11 Details regarding this variance are explained below:

- 12 • Decreased spending for City Works Projects – Spending in 2019 was \$556,201 lower
13 than 2018 due to reduced City-executed road modifications compared to the previous
14 year. During 2019, the City of London continued their major rebuild of Dundas Street,
15 near the downtown core, resulting in fewer modifications to other roadways throughout

1 the city. This major project, Dundas Place, is described in detail in the DSP, in Section
2 3.2b – Historical Variances by Category.

- 3 • Increased spending for Developer Works Projects – In 2019, Developer Works Project
4 spending was \$1,154,585 higher than 2018 due to two major commercial customer system
5 expansions and increased residential real estate demand in London, Ontario.

6 *System Renewal*

7 2019 System Renewal net capital expenditures were \$3,112,963 or 17% higher than 2018 as
8 shown in Table 2-36 below.

9 **Table 2-36 – 2018 Actual vs. 2019 Actual Capital Expenditure Variance – System Renewal**

CAPITAL SPENDING VARIANCE ANALYSIS				
2018 ACTUALS VS 2019 ACTUALS				
Annual Spending	2018	2019		
Details by Investment Category	Actual	Actual	Variance	Variance
	\$	\$	\$	%
System Renewal				
Substation Rebuilds	118,687	136,761	18,074	15%
Subdivision Rebuilds	5,410,852	4,395,224	(1,015,627)	-19%
Main Feeders	5,900,069	7,982,948	2,082,880	35%
Downtown Core Supply	3,485,064	5,100,838	1,615,774	46%
Overhead Line Work	3,430,481	3,842,344	411,863	12%
Total System Renewal	18,345,153	21,458,115	3,112,963	17%

10
11 Details regarding this variance are explained below:

- 12 • Decreased spending for Subdivision Rebuilds – Capital spending in 2019 was \$1,015,627
13 lower than 2018 primarily due to the temporary deferral of some projects in order to focus
14 resources on the rebuild work along Dundas Street and the deferral of Silicone Injection
15 projects.
- 16 • Increased spending for Main Feeders – Capital spending in 2019 was \$2,082,880 higher
17 than 2018 and is related to the City of London’s Dundas Place rebuild advancing additional
18 main feeder upgrade work. Starting in 2018 and continuing into 2019, the City initiated a
19 multi-year project to completely rebuild Dundas Street, from Ridout Street to Wellington
20 Street. As part of the City’s proposal, they placed a moratorium on construction in the area
21 for 10 years. As a result, London Hydro was required to advance its timeline for the
22 planned replacement of aging infrastructure within the area. By coordinating the City’s

rebuild project with London Hydro's advanced replacement of aging infrastructure, London Hydro was able to avoid costs such as surface restoration, traffic control, and project management while having the ability to install a new, consolidated and efficient system which will serve this section of the city safely and reliably for years to come. This major project, Dundas Place, is described in detail in the DSP, in Section 3.2b – Historical Variances by Category.

- Increased spending for Downtown Core Supply – Capital spending in 2019 was \$1,615,774 higher than 2018 and is related to the City of London's Dundas Place rebuild (see above).
- Increased spending for Overhead Line Work – In 2019, Overhead Line Work spending was \$411,863 higher than 2018. Most of this variance is attributable to the continuation of projects related to 4.16kV and 13.8kV voltage conversions that were previously deferred in 2018, as well as some additional porcelain insulator and Firon switch replacements to improve reliability.

System Service

System Service spending levels in 2019 were in line with 2018 expenditures.

General Plant

2019 System Access net capital expenditures were \$3,766,012 or 27% lower than 2018 as shown in Table 2-37 below.

Table 2-37 – 2018 Actual vs. 2019 Actual Capital Expenditure Variance – General Plant

CAPITAL SPENDING VARIANCE ANALYSIS				
2018 ACTUALS VS 2019 ACTUALS				
Annual Spending	2018	2019		
Details by Investment Category	Actual	Actual	Variance	Variance
	\$	\$	\$	%
General Plant				
Capital Contribution to Transformer Station	1,938,202	-	(1,938,202)	-100%
Land, Buildings and Equipment	4,116,717	2,558,402	(1,558,315)	-38%
Vehicles & Major Equipment	1,026,456	1,492,724	466,268	45%
Hardware / Software	777,302	396,284	(381,018)	-49%
Application Development	4,158,776	5,856,249	1,697,473	41%
JD Edwards	2,052,217	-	(2,052,217)	-100%
Total General Plant	14,069,670	10,303,659	(3,766,012)	-27%

1 Details regarding this variance are explained below:

- 2 • Decreased spending for Capital Contribution to Transformer Station – This is associated
3 with the conversion of Hydro One’s Nelson Transformer Station (TS). In 2015, an
4 agreement was reached whereby Hydro One would rebuild the Nelson TS and London
5 Hydro would be responsible for only the incremental costs of conversion. This amount was
6 previously submitted and approved in the 2017 Cost of Service Rate Application, through
7 an Advanced Capital Model. The terms of the agreement with Hydro One were
8 documented in a CCRA, with an annual payment paid each year covering 2015-2018. The
9 decrease in capital spending of \$1,938,202 from 2018 to 2019 is a result of no payment
10 being made in 2019. More information on this can be found within this Exhibit, in Section
11 2.7, entitled “Addition of Previously Approved ACM and ICM Project Assets to Rate Base”.
- 12 • Decreased spending for Land, Buildings and Equipment – Capital spending in 2019 was
13 decreased by \$1,558,315 between 2018 and 2019. This is due to two offsetting factors.
14 Firstly, the adoption of IFRS 16 “Leases” in 2018 resulted in capital spending of
15 \$2,318,969 in 2018, with no comparable amount in 2019. Offsetting this was increased
16 spending for continued office renovations as well as the Operations Uninterrupted Power
17 Supply (UPS) replacement. The UPS services the System Operating Centre (SOC) and
18 the SCADA systems, and were fully depreciated and for which repair parts were no longer
19 available. As a result, it was necessary to replace this system to improve the safety and
20 reliability of the SOC.
- 21 • Increased spending for Vehicles & Major Equipment – Capital spending in 2019 was
22 \$466,268 higher than 2018 primarily due to delivery delays from 2018 for 2 large vehicles
23 that were received in 2019, as well as the purchase of a new backyard radial boom derrick
24 to improve safety and efficiency for backyard conversion pole replacement projects.
- 25 • Decreased spending for Hardware/Software – Capital spending in 2019 was \$381,018
26 lower than 2018 primarily because of the completion of the Server and SAN Switch refresh
27 program that took place in 2018 (and completed in early 2019). This program required
28 London Hydro to replace existing end-of-life hardware in the data centre and provide a
29 path for adding additional Cisco chassis with new blade servers in order to mitigate the
30 risk of an unsupported system.

- 1 • Increased spending for Application Development – In 2019, Application Development
2 spending was \$1,697,473 higher than 2018 primarily due to deferred projects from 2018.
3 In 2018, London Hydro utilized most of its resources to complete a major JD Edwards
4 Upgrade while also participating in the OEB’s Regulated Price Plan Pilot Project. As a
5 result, multiple planned projects from 2018 were deferred to 2019. Key projects
6 undertaken in 2019 were the payroll system refresh, barcoding, additional Cyber Security
7 and enhancing myLH portal to improve billing representation, as well as becoming the first
8 utility company in Ontario to process credit cards without added fees.
- 9 • Decreased spending for JD Edwards – The JD Edwards upgrade discussed above went
10 live in 2018, and resulted in no additional spending in 2019. This created a decrease in
11 capital spending in the amount of \$2,052,217.

12 *Capital Contributions*

13 In 2019, London Hydro received Capital Contributions in the amount of \$4,358,519, which is
14 \$436,748 lower than in 2018. All contributions received pertain to System Access projects.

1 **2019 Actual vs. 2020 Actual**

2 2020 Actual net capital expenditures were \$1,723,744 or 4% lower than 2019 Actuals as shown
3 in Table 2-38 below.

4 **Table 2-38 – 2019 Actual vs. 2020 Actual Capital Expenditure Variance**

CAPITAL SPENDING VARIANCE ANALYSIS 2019 ACTUALS VS 2020 ACTUALS				
Annual Spending	2019	2020		
Summary by Investment Category	Actual	Actual	Variance	Variance
	\$	\$	\$	%
System Access	11,406,027	12,745,761	1,339,734	12%
System Renewal	21,458,115	18,826,473	(2,631,643)	-12%
System Service	674,582	1,053,686	379,103	56%
General Plant	10,303,659	9,806,858	(496,800)	-5%
Other	(824,043)	1,342,093	2,166,135	-263%
	43,018,340	43,774,870	756,530	2%
Capital Contributions	(4,358,519)	(6,838,793)	(2,480,274)	57%
Total	38,659,821	36,936,077	(1,723,744)	-4%

5
6 *System Access*

7 2020 System Access net capital expenditures were \$1,339,734 or 12% higher than 2019 as
8 shown in Table 2-39 below.

9 **Table 2-39 – 2019 Actual vs. 2020 Actual Capital Expenditure Variance – System Access**

CAPITAL SPENDING VARIANCE ANALYSIS 2019 ACTUALS VS 2020 ACTUALS				
Annual Spending	2019	2020		
Details by Investment Category	Actual	Actual	Variance	Variance
	\$	\$	\$	%
System Access				
City Works Projects	281,636	1,261,346	979,711	348%
Developer Works Projects	9,824,439	9,855,787	31,348	0%
Meters & Devices	1,299,952	1,628,628	328,676	25%
Total System Access	11,406,027	12,745,761	1,339,734	12%

10
11 Details regarding this variance are explained below:

- 12 • Increased spending for City Works Projects – Spending in 2020 was \$979,711 higher than
13 2019 due to increased City-executed road modifications compared to the previous year.
14 These City-driven projects were higher in 2020 compared to 2019 because the City
15 completed their major rebuild of Dundas Street in the first quarter of 2020 and resumed

planned modifications, including projects deferred from 2019, to other roadways throughout the city that constitute City Works Projects.

- Increased spending for Meters & Devices – Capital spending in 2020 was \$328,676 higher than 2019. This variance is attributable to AMI Network enhancements made in 2020 to address capacity concerns in highly congested sites. The project involved the installation of additional transceiver gateway base stations (TGB's) and antennas at Substation 15 to increase capacity, ensure high availability, increase performance and provide future expansions.

System Renewal

2020 System Access net capital expenditures were \$2,631,643 or 12% lower than 2019 as shown in Table 2-40 below.

Table 2-40 – 2019 Actual vs. 2020 Actual Capital Expenditure Variance – System Renewal

CAPITAL SPENDING VARIANCE ANALYSIS 2019 ACTUALS VS 2020 ACTUALS				
Annual Spending	2019	2020		
Details by Investment Category	Actual	Actual	Variance	Variance
	\$	\$	\$	%
System Renewal				
Substation Rebuilds	136,761	116,271	(20,490)	-15%
Subdivision Rebuilds	4,395,224	8,978,678	4,583,454	104%
Main Feeders	7,982,948	3,162,644	(4,820,304)	-60%
Downtown Core Supply	5,100,838	1,990,393	(3,110,446)	-61%
Overhead Line Work	3,842,344	4,578,487	736,143	19%
Total System Renewal	21,458,115	18,826,473	(2,631,643)	-12%

Details regarding this variance are explained below:

- Increased spending for Subdivision Rebuilds – Capital spending in 2020 was \$4,583,454 higher than 2019. Most of this variance is attributable to the continuation of projects related to underground conversion and replacement of aging residential underground primary cable that were previously deferred in 2019.
- Decreased spending for Main Feeders – Capital spending in 2020 was \$4,820,304 lower than 2019 due to the completion of the advanced work along Dundas Street, as discussed in 2018 and 2019 variance explanations.
- Decreased spending for Downtown Core Supply – Capital spending in 2020 was \$3,110,446 lower than 2019 and is related to the completion of the City of London's Dundas Place rebuild (see above).

- Increased spending for Overhead Line Work – In 2020, Overhead Line Work spending was \$736,143 higher than 2019 primarily due to increased spending on voltage conversions and deteriorated poles that were determined to require replacement as a result of the Asset Condition Assessment. In 2020, London Hydro continued its conversion work to address the aging 4.16kV infrastructure as well as converting the remaining 13.8kV overhead lines to 27.6kV that was previously deferred in prior years.

System Service

2020 System Service net capital expenditures were \$379,103 or 56% higher than 2019 as shown in Table 2-41 below.

Table 2-41 – 2019 Actual vs. 2020 Actual Capital Expenditure Variance – System Service

CAPITAL SPENDING VARIANCE ANALYSIS 2019 ACTUALS VS 2020 ACTUALS				
Annual Spending Details by Investment Category	2019 Actual	2020 Actual	Variance	Variance
	\$	\$	\$	%
System Service				
Subdivision Rebuilds	67,376	70,864	3,489	5%
Main Feeders	-	498	498	
SCADA and Control Room	607,207	982,323	375,117	62%
Total System Service	674,582	1,053,686	379,103	56%

Details regarding this variance are explained below:

- Increased spending for SCADA and Control Room – In 2020, SCADA and Control Room Project spending was \$375,117 higher than 2019 primarily due to the replacement of numerous failed automated reclosers and some enhancements to SCADA cyber security. Many of the previously deployed legacy devices employed by the SCADA system had limited security functionality. To address this weakness, London Hydro developed a multi-faceted SCADA Cyber Security program to replace legacy SCADA assets with modern devices, thereby mitigating the risk of remote security breaches and optimizing system availability and scalability.

1 *General Plant*

2 2020 General Plant net capital expenditures were \$496,800 or 5% lower than 2019 as shown in
3 Table 2-42 below.

4 **Table 2-42 – 2019 Actual vs. 2020 Actual Capital Expenditure Variance – General Plant**

CAPITAL SPENDING VARIANCE ANALYSIS 2019 ACTUALS VS 2020 ACTUALS				
Annual Spending	2019	2020		
Details by Investment Category	Actual	Actual	Variance	Variance
	\$	\$	\$	%
General Plant				
Land, Buildings and Equipment	2,558,402	1,827,944	(730,458)	-29%
Vehicles & Major Equipment	1,492,724	1,470,038	(22,685)	-2%
Hardware / Software	396,284	1,028,289	632,005	159%
Application Development	5,856,249	5,480,587	(375,662)	-6%
Total General Plant	10,303,659	9,806,858	(496,800)	-5%

5
6 Details regarding this variance are explained below:

- 7 • Decreased spending for Land, Buildings and Equipment – Land, Building and Equipment
8 spending consists of furniture and operating equipment purchases as well as
9 improvements and renovations of London Hydro main office buildings, operations
10 buildings, and land. Capital spending for Land, Buildings and Equipment in 2020 was
11 \$730,458 lower than 2019 due to the deferral of multiple planned projects as a result of
12 COVID-19.
- 13 • Increased spending for Hardware/Software – Capital spending in 2020 was \$632,005
14 higher than 2019 primarily due to the Network Technology Refresh. Prior to 2020, all
15 network devices had reached their end-of-life and the existing WIFI devices software
16 support was expiring within the year. As a result, London Hydro developed a new network
17 infrastructure that enhanced service delivery capability while improving cyber security and
18 reducing operational complexity.
- 19 • Decreased spending for Application Development – In 2020, Application Development
20 spending was \$375,662 lower than 2019 primarily due to the completion of the Payroll
21 Upgrade which was completed in late 2019. In 2019, London Hydro implemented a new
22 cloud-based payroll solution to replace the legacy payroll system that was over 12 years
23 old. The new Ultipro Payroll Software system has allowed payroll processing to be
24 completed in-house while mitigating the risks surrounding an obsolete unsupported

1 system, and providing improved reliability, enhanced security, and additional internal
2 controls.

3 *Capital Contributions*

4 In 2020, London Hydro received Capital Contributions in the amount of \$6,838,793, which is
5 \$2,480,274 higher than in 2019. All contributions received pertain to System Access projects.
6 This included a final capital contribution of \$1,756,904 related to the final annual review of the
7 City of London's Innovation Park Expansion (Phase 2).

1 **2020 Actual vs. 2021 Bridge Year**

2 2021 Bridge Year net capital expenditures are projected to be \$1,959,077 or 5% lower than 2020
3 Actuals as shown in Table 2-43 below.

4 **Table 2-43 – 2020 Actual vs. 2021 Bridge Year Capital Expenditure Variance**

CAPITAL SPENDING VARIANCE ANALYSIS 2020 ACTUALS VS 2021 BRIDGE YEAR				
Annual Spending	2020	2021		
Summary by Investment Category	Actual	Bridge	Variance	Variance
	\$	\$	\$	%
System Access	12,745,761	13,923,000	1,177,239	9%
System Renewal	18,826,473	17,504,000	(1,322,473)	-7%
System Service	1,053,686	1,095,000	41,314	4%
General Plant	9,806,858	9,589,000	(217,858)	-2%
Other	1,342,093	(600,000)	(1,942,093)	-145%
	43,774,870	41,511,000	(2,263,870)	-5%
Capital Contributions	(6,838,793)	(6,534,000)	304,793	-4%
Total	36,936,077	34,977,000	(1,959,077)	-5%

5
6 *System Access*

7 2021 System Access net capital expenditures are projected to be \$1,177,239 or 9% higher than
8 2020 as shown in Table 2-44 below.

9 **Table 2-44 – 2020 Actual vs. 2021 Bridge Year Capital Expenditure Variance – System Access**

CAPITAL SPENDING VARIANCE ANALYSIS 2020 ACTUALS VS 2021 BRIDGE YEAR				
Annual Spending	2020	2021		
Details by Investment Category	Actual	Bridge	Variance	Variance
	\$	\$	\$	%
System Access				
City Works Projects	1,261,346	3,676,000	2,414,654	191%
Developer Works Projects	9,855,787	8,505,000	(1,350,787)	-14%
Meters & Devices	1,628,628	1,742,000	113,372	7%
Total System Access	12,745,761	13,923,000	1,177,239	9%

10
11 Details regarding this variance are explained below:

- 12 • Increased spending for City Works Projects - Spending in 2021 is anticipated to be
13 \$2,414,654 higher than 2020, primarily due to the planned City-executed road
14 modifications related to major transit and infrastructure improvements beginning in 2021,
15 and extending over the next several years. In 2021, London Hydro will be required to
16 relocate infrastructure to accommodate Phase 1 and extensive design and consulting

work for Phase 2 of the Downtown Transit Loop, Wellington Gateway and the road widening of Wharncliffe Rd and Oxford St.

- Decreased spending for Developer Works Projects – In 2021, it is anticipated that Developer Works Project spending will be \$1,350,787 lower than 2020 due to a projected reduction in system expansions, and single family and multi-housing residential real estate demand in London.

System Renewal

2021 System Renewal net capital expenditures are projected to be \$1,322,473 or 7% lower than 2020 as shown in Table 2-45 below.

Table 2-45 – 2020 Actual vs. 2021 Bridge Year Capital Expenditure Variance – System Renewal

CAPITAL SPENDING VARIANCE ANALYSIS 2020 ACTUALS VS 2021 BRIDGE YEAR				
Annual Spending	2020	2021		
Details by Investment Category	Actual	Bridge	Variance	Variance
	\$	\$	\$	%
System Renewal				
Substation Rebuilds	116,271	345,000	228,729	197%
Subdivision Rebuilds	8,978,678	7,478,000	(1,500,678)	-17%
Main Feeders	3,162,644	2,021,000	(1,141,644)	-36%
Downtown Core Supply	1,990,393	2,560,000	569,607	29%
Overhead Line Work	4,578,487	5,100,000	521,513	11%
Total System Renewal	18,826,473	17,504,000	(1,322,473)	-7%

Details regarding this variance are explained below:

- Decreased spending for Subdivision Rebuilds – Capital spending in 2021 is projected to be \$1,500,678 lower than 2020. Most of this variance is attributable to the gradual reduction in 13.8kV conversion related projects as the project work approaches completion.
- Decreased spending for Main Feeders – Capital spending in 2021 is projected to be \$1,141,644 lower than 2020. This is related to the shifting of resources away from this area, towards major transit and infrastructure improvements (under City Works Projects above). These projects begin in 2021 and extend over the next several years. In conjunction with the City's projects, London Hydro will replace sections of its existing concrete encased duct and maintenance hole systems, or install additional structural

1 capacity in sections where audits have identified structural integrity is at, or nearing, the
2 end of its useful life. Coordinating this work with the City of London will achieve some cost
3 savings.

- 4 • Increased spending for Downtown Core Supply – Capital spending in 2021 is projected to
5 be \$569,607 higher than 2020. This variance is primarily attributable to the planned
6 replacement of various maintenance holes and network transformer vaults within the
7 downtown core, that were identified during an extensive inspection of civil structures
8 requiring replacement due to safety and reliability concerns.
- 9 • Increased spending for Overhead Line Work – In 2021, Overhead Line Work spending is
10 projected to be \$521,513 higher than 2020 primarily due to an increase in the planned
11 replacement of deteriorating poles and fixtures that were identified as being in poor
12 condition and requiring replacement due to safety and reliability concerns.

13 *System Service*

14 System Service spending levels projected in 2021 are in line with 2020 expenditures.

15 *General Plant*

16 General Plant spending levels projected in 2021 are in line with 2020 expenditures.

17 *Capital Contributions*

18 In 2021, London Hydro is projected to receive Capital Contributions in the amount of \$6,534,000
19 which is \$304,793 lower than in 2020. All contributions received pertain to System Access
20 projects. This amount includes a final capital contribution of \$1,830,000 related to the final annual
21 review of the City of London's Innovation Park Expansion (Phases 3 and 4).

1 **2021 Bridge Year vs. 2022 Test Year**

2 2022 Test Year net capital expenditures are projected to be \$12,515,000 or 36% higher than 2021
3 Bridge Year as shown in Table 2-46 below.

4 **Table 2-46 – 2021 Bridge Year vs. 2022 Test Year Capital Expenditure Variance**

CAPITAL SPENDING VARIANCE ANALYSIS 2021 BRIDGE YEAR VS 2022 TEST YEAR				
Annual Spending	2021	2022		
Summary by Investment Category	Bridge	Test	Variance	Variance
	\$	\$	\$	%
System Access	13,923,000	17,987,000	4,064,000	29%
System Renewal	17,504,000	17,493,000	(11,000)	0%
System Service	1,095,000	1,135,000	40,000	4%
General Plant	9,589,000	15,935,000	6,346,000	66%
Other	(600,000)	(500,000)	100,000	-17%
	41,511,000	52,050,000	10,539,000	25%
Capital Contributions	(6,534,000)	(4,558,000)	1,976,000	-30%
Total	34,977,000	47,492,000	12,515,000	36%

5
6 *System Access*

7 2022 System Access net capital expenditures are projected to be \$4,064,000 or 29% higher than
8 2021 as shown in Table 2-47 below.

9 **Table 2-47 – 2021 Bridge Year vs. 2022 Test Year Capital Expenditure Variance – System Access**

CAPITAL SPENDING VARIANCE ANALYSIS 2021 BRIDGE YEAR VS 2022 TEST YEAR				
Annual Spending	2021	2022		
Details by Investment Category	Bridge	Test	Variance	Variance
	\$	\$	\$	%
System Access				
City Works Projects	3,676,000	7,655,000	3,979,000	108%
Developer Works Projects	8,505,000	8,633,000	128,000	2%
Meters & Devices	1,742,000	1,699,000	(43,000)	-2%
Total System Access	13,923,000	17,987,000	4,064,000	29%

10
11 Details regarding this variance are explained below:

- 12 • Increased spending for City Works Projects – Spending in 2022 is anticipated to be
13 \$3,979,000 higher than 2021, primarily due to the planned City-executed road
14 modifications related to major transit and infrastructure improvements beginning in 2021
15 and extending over the next several years. In 2022, London Hydro will be required to

relocate infrastructure to accommodate Phase 2 of the Downtown Transit Loop, East London Link, continuation of Wharncliffe Rd underpass and the Adelaide Underpass.

System Renewal

System Renewal spending levels projected in 2022 are in line with projected 2021 expenditures.

System Service

System Service spending levels projected in 2022 are in line with projected 2021 expenditures.

General Plant

2022 General Plant net capital expenditures are projected to be \$6,346,000 or 66% higher than 2021 as shown in Table 2-48 below.

Table 2-48 – 2021 Bridge Year vs. 2022 Test Year Capital Expenditure Variance – General Plant

CAPITAL SPENDING VARIANCE ANALYSIS 2021 BRIDGE YEAR VS 2022 TEST YEAR				
Annual Spending	2021	2022		
Details by Investment Category	Bridge	Test	Variance	Variance
	\$	\$	\$	%
General Plant				
Capital Contribution to Transformer Station	(1,750,000)	-	1,750,000	-100%
Land, Buildings and Equipment	4,071,000	2,781,000	(1,290,000)	-32%
Vehicles & Major Equipment	1,445,000	1,450,000	5,000	0%
Hardware / Software	1,020,000	829,000	(191,000)	-19%
Application Development	4,303,000	4,375,000	72,000	2%
CIS Refresh	500,000	6,500,000	6,000,000	1200%
Total General Plant	9,589,000	15,935,000	6,346,000	66%

Details regarding this variance are explained below:

- Increase spending for Capital Contribution to Transformer Station – At the time of submission of this Rate Application, Hydro One has completed most of the work at the Nelson TS, and has found that the actual cost is much less than originally estimated. Because of this, London Hydro will not be invoiced for a final reconciliation payment of \$1,450,000 that was expected in 2021. Rather, London Hydro is estimating a refund from Hydro One in the amount of \$1,750,000. The decommissioning component of the project began in July 2021.
- Decreased spending for Land, Buildings and Equipment – Capital spending for Land, Buildings and Equipment in 2022 is \$1,290,000 lower than 2021 due to the planned

1 completion of the new fuel dispensing system and new substation security equipment
2 which will be completed in 2021.

- 3 • Increase spending for CIS Refresh – Capital spending for CIS Refresh represents the
4 planned upgrade of London Hydro’s existing SAP CIS system to SAP S/4 HANA. Capital
5 spending in 2022 is \$6,000,000 higher than 2021. The upgrade will continue in 2022 with
6 an additional \$6,500,000 planned to be spent. This project has been submitted through
7 an ACM (see Section 2.6, “Policy Options for the Funding of Capital” for details) and will
8 remain in work-in-progress until its planned go-live 2023.

9 *Capital Contributions*

10 In 2022, London Hydro is projected to receive Capital Contributions in the amount of \$4,558,000
11 which is \$1,976,000 lower than in the projected 2021 amount. All contributions received pertain
12 to System Access projects.

2.6 POLICY OPTIONS FOR THE FUNDING OF CAPITAL

Overview

On September 18, 2014, the OEB issued the Report of the Board - New Policy Options for the Funding of *Capital Investments: The Advanced Capital Module (EB-2014-0219)* (the ACM Report). The Advanced Capital Module (ACM) reflects an evolution of the Incremental Capital Module (ICM) adopted by the OEB in 2008.

The ACM expands the ICM concept to incorporate the concept of recovery for qualifying incremental capital investments during the Price Cap IR period with an opportunity to identify and pre-test such discrete capital projects documented in the DSP as part of the cost of service application.

As part of a cost of service application, a distributor may propose qualifying ACM capital projects that are expected to come into service during the subsequent Price Cap IR term. These will be discrete projects as documented in the DSP. The distributor must also identify that it is proposing ACM treatment for these future projects, and provide the cost information and ACM/ICM materiality threshold calculations to show that these would qualify for ACM treatment based on the forecasted information at the time of the DSP and cost of service application. The ACM Report provides further details on the information required. A distributor applying for an ACM must file the completed spreadsheet: Capital Module Applicable to ACM and ICM.

The timing and actual amount of the rate riders used to recover the costs of qualifying ACM projects in the subsequent Price Cap IR period will not be determined in the cost of service application. This determination will be made in the Price Cap IR application for the year in which the capital investment will be made and the project comes into service. At that time, the distributor must file updated information on the forecasted costs and demonstrate that the capital project still qualifies for incremental capital funding and recovery. However, the nature and need for the project will be determined as part of the DSP during the cost of service application.

1 On January 22, 2016, the OEB issued the *Report of the OEB - New Policy Options for the Funding*
2 *of Capital Investments: Supplemental Report (EB-2014-0219)*. This report made changes to the
3 materiality threshold on which both ICM and ACM proposals are assessed, but otherwise does
4 not alter the requirements for ACM and ICM proposals by an applicant. The Supplemental Report
5 also reaffirms the applicability of the half-year rule for determining the return on capital in the first
6 year that assets enter service.

7 Consistent with the OEB Filing Requirements issued on June 24, 2021, London Hydro has
8 completed the OEB model 2022_ACM_ICM_Model as found on the OEB website. PDF copies
9 of the model can be found in Exhibit 2, Appendix 2-2, as well the live Excel version submitted with
10 this application.

11 *ACM Criteria*

12 An ACM is available to distributors during the Price Cap IR years for capital investment needs
13 that are additional to those approved through the last cost of service application.

14 Capital projects included in an ACM request must meet three criteria:

15 **Materiality** – each incremental capital project or expenditure must be material and clearly have
16 a significant influence on the operation of the distributor,

17 **Need** – distributor must pass the Means Test; amounts must be based on discrete projects
18 and directly related to the claimed driver, and must be clearly outside of the base upon
19 which the rates were derived, and

20 **Prudence** – amounts to be incurred must be prudent.

21 In addition to the criterion that each project included in the ACM request be material, the total
22 ACM request must exceed the ACM materiality threshold.

23 *Project Materiality*

24 Each capital project approved for ACM funding must be material to the distributor. Project
25 materiality is 0.5% of distribution revenue requirement for distributors with a revenue requirement
26 greater than \$10 million and less than or equal to \$200 million. London Hydro's requested

1 distribution revenue requirement is \$80,048,456 resulting in a project materiality of \$397,000.
2 See Exhibit 1 for calculation.

3 *Need and the Means Test*

4 As part of the criterion of need, the OEB applies the Means Test when reviewing ACM
5 applications. The Means Test states that if a distributor's regulated return exceeds 300 basis
6 points above the deemed regulatory return on equity (ROE) embedded in its rates, the funding
7 for any incremental capital project will not be allowed. London Hydro submits it is herein
8 requesting an adjustment to its regulatory ROE to 8.34% and has not, at any time, exceeded its
9 scorecard ROE deemed equity by the dead band of 300 basis points over the last many years.

10 *Prudence*

11 To be eligible for ACM funding, expenditures must be prudent, illustrating good judgement in the
12 management of capital budgets. London Hydro is confident that the OEB will find that the
13 proposed projects are prudent as described in the presentation of details below.

14 *ACM Materiality Threshold*

15 The OEB expects a distributor to fund its capital expenditures within the ACM materiality
16 threshold, before being eligible to apply for ACM funding. The ACM materiality threshold is
17 deducted from the total ACM request to determine the amount eligible to be recovered from
18 customers.

19 The OEB has defined the ACM materiality threshold in Chapter 3 of the *Filing Requirements for*
20 *Electricity Distribution Rate Applications* (the Filing Requirements). It represents a distributor's
21 financial capacities underpinned by existing rates, including growth and a 10% dead band. The
22 equation used to calculate the materiality threshold at the time of London Hydro's application is
23 as follows:

24
$$\text{Threshold Value (\%)} = 1 + \left[\left(\frac{RB}{d} \right) \times (g + PCI \times (1 + g)) \right] \times ((1 + g) \times (1 + PCI))^{n-1} + 10\%$$

25 Where:

26 RB = rate base included in base rates (\$)

27 d = depreciation expense included in base rates (\$)

28 g = distribution revenue change from load growth (%)

29 PCI = price cap index

1 **Proposed Project: CIS Refresh**

2 London Hydro is planning to undergo a CIS/CRM (Customer Information System / Customer
3 Relationship Management) transformation program to address SAP system obsolescence and to
4 improve the customer experience, operational efficiencies and employee engagement. This
5 initiative is aligned to London Hydro's mission to provide technology leadership, while delivering
6 cost effective and flexible technology solutions and services to London Hydro's business users
7 and its customers.

8 In 2019, London Hydro and consulting partner (EY) jointly developed a CIS strategy to address
9 current pain points, meet the needs of tomorrow, add value to the business and reduce LH's CIS
10 platform complexity and cost of ownership.

11 The option analysis demonstrated that upgrading to SAP S/4 HANA allows London Hydro to
12 mitigate high switching costs, implementation and execution risks compared to implementing a
13 custom, Tier 2 or Tier 1 solution such as Oracle CC&B. The one-time cost for implementation is
14 estimated as \$18.5M, with a time frame of 18 to 24 months to design, deploy and test the CIS
15 solution.

16 Based on the benefit, cost and risk trade-offs of the options presented, the recommendation of
17 the study was to upgrade the current CIS system to the new SAP S/4 HANA solution. The original
18 report ("London Hydro CIS Study") was prepared and presented in December 2019. The study
19 was also updated in April 2021, as part of the update to IT Strategy for 2021 to 2025. A
20 summarized version of this report is included in Appendix 2-3 of this application.

21 EY's study highlighted the following:

- 22 • implications of maintaining and opportunities for replacing the current system,
- 23 • comparison of alternative options for upgrading CIS,
- 24 • timeline for implementation,
- 25 • mitigation of internal and external risk factors, and
- 26 • estimated project costs which include both capital and operating.

1 In addition to mitigating the technology currency risks of the current solution, this solution enables
2 a number of benefits for London Hydro:

- 3 • Enhance digital innovation: A legacy SAP system would inhibit London Hydro’s ability to
4 leverage improvements to drive innovation or would require London Hydro to build a
5 complex environment around the legacy SAP instance to support innovations, which will
6 be avoided by a new system
- 7 • Provide scalability and flexibility: Ability to support current needs today and tomorrow by
8 continually enhancing service capabilities to meet customer needs
- 9 • Enhance customer engagement: Accurate, real-time consumption data to meet customer
10 demands with increasing analytical capabilities and respond to increasing customer
11 demands for personalized, real time data

12 The CIS upgrade is planned to take place between 2021 – 2023, with a go-live date in 2023, and
13 a total one-time capital cost of \$18.5M. A project breakdown is shown in Table 2-52 below:

14 **Table 2-52 – CIS Refresh – Project Breakdown**

Project Name	Description / Objective
CIS Refresh - 2021 (\$500,000)	
CIS Refresh - Development of the Data Model and Management	Development of the Data Model and Management focused on S/4HANA, including customization rationalization, master data architecture development, data governance, and data warehousing documentation
CIS Refresh - 2022 (\$6,500,000)	
CIS Refresh - Development of future state architecture	Development of future state architecture, including functional / business architecture and technology architecture
CIS Refresh - Procurement of Solution & System Integrator	Procurement of solution and system integrator, including preparation of RFP, system integrator selection and negotiations
CIS Refresh - 2023 (\$11,500,000)	
CIS Refresh - System Design & Implementation	System design and implementation, including detailed design and requirements documentation, implementation, training, and QA / Testing activities
CIS Refresh - System Stabilization	SAP S/4 HANA system stabilization, including post go-live support for applications, monitor adoption by London Hydro
Total - \$18,500,000	

2.7 ADDITION OF PREVIOUSLY APPROVED ACM and ICM PROJECT ASSETS TO RATE BASE

London Hydro has three approved ICM project assets from a previous Cost of Service Rate Application (EB-2016-0091), two of which it is proposing to be incorporated into rate base.

London Hydro made an ACM request as part of a 2017 cost of service application (EB-2016-0091). In that application, the need for and prudence of London Hydro's requests (two projects) were determined. Cost recovery (i.e. rate riders) for qualifying ACM projects were determined in the 2018 Price Cap IR application in which year the capital investment came into service. London Hydro received an approval for cost recovery through the 2018 Price Cap IR application.

London Hydro followed the OEB's guidelines to record all relevant expenditures and revenues collected in 1508 Other Regulatory Asset accounts. The audited account balances are presented in London Hydro's Audited Financial Statements as at December 31, 2020. The audited account balances are also reported in E2.1.7 Reporting and Record-keeping Requirements Trial Balance on December 31, 2020.

Table 2-53 below shows actual capital expenditures as of the 2022 Test Year, compared to the 2017 OEB Approved Amounts. Individual project variances are discussed below within their respective sections.

Table 2-53 – ACM: 2017 OEB Approved vs. Total Actual Capital Expenditure Variance

ADVANCED CAPITAL MODULE ACTUAL VS. OEB APPROVED CAPITAL SPENDING				
Project Descriptions:	Actual Spending	OEB Approved Spending	Variance	Variance
	\$	\$	\$	%
Nelson TS Capital Contribution	5,507,706	8,615,590	3,107,884	56%
JD Edwards	2,591,309	2,000,000	(591,309)	-23%
Hydro One CCRA True-up's - Talbot & Buchanan	-	500,000	500,000	0%
Total	8,099,016	11,115,590	3,016,574	37%

1 **ACM Projects**

2 Table 2-54 below shows the net book value of ACM Projects that London Hydro is proposing to
3 bring into rate base as of January 1, 2022. The total net book value of these projects ties to Table
4 2-8 (Summary of Continuity Schedules) within Section 2.1.2 above.

5 **Table 2-54 – Net Book Value of ACM Projects Entering Rate Base (January 1, 2022)**

ADVANCED CAPITAL MODULE CAPITAL ASSET AMOUNTS INCORPORATED INTO RATE BASE			
Project Descriptions:	Asset Cost	Accumulated Depreciation	Net Book Value
	\$	\$	\$
Nelson TS Capital Contribution	5,507,706	(486,242)	5,021,464
JD Edwards	2,591,309	(1,727,540)	863,770
Total Transferred into Rate Base January 1, 2022	8,099,016	(2,213,782)	5,885,234

6
7 *Nelson TS Capital Contribution*

8 The decision to convert Nelson TS from 13.8 kV to 27.6 kV was based on a collaborative approach
9 to long term supply options for the City of London, conducted by London Hydro and Hydro One
10 (Ontario Hydro).

11 In early 2015, an agreement was reached whereby Hydro One would rebuild Nelson TS at 27.6
12 kV and London Hydro would be responsible for only the incremental cost of conversion. The
13 terms of the agreement with Hydro One were documented in a CCRA, with an annual payment
14 paid each year covering 2015-2018.

15 At the time of submission of this Rate Application, Hydro One has completed most of the work at
16 the Nelson TS, and has found that the actual cost is much less than originally estimated. Because
17 of this, London Hydro will not be invoiced for a final reconciliation payment of \$1,450,000 that was
18 expected in 2021. Rather, London Hydro is estimating a refund from Hydro One in the amount of
19 \$1,750,000. The decommissioning component of the project began in July 2021. These factors
20 together create the \$3,107,884 favourable variance between the 2017 OEB Approved amount
21 and the total actual capital spending.

1 London Hydro proposes to incorporate \$5,021,464 in rate base in 2022 pertaining to this project
2 (an addition to opening net fixed assets comprised of \$5,507,706 in incremental capital net of
3 \$486,242 of accumulated depreciation). These amounts are included in columns E and K in the
4 2022 Fixed Asset Continuity Schedules filed in Tab “App.2-BA_Fixed Asset Cont” of the Chapter
5 2 Appendices.

6 *JD Edwards Upgrade*

7 London Hydro’s financial accounting system, JD Edwards (JDE), was upgraded in 2018. The
8 previous version was at end-of-life and in need of replacement. With the implementation of the
9 latest version of JDE, London Hydro reduced the risks associated with system obsolescence. In
10 addition, with this upgrade, London Hydro was able to automate processes that were previously
11 difficult to incorporate, thereby, increasing efficiency. This upgrade was discussed in length in
12 London Hydro’s 2017 Cost of Service Application.

13 London Hydro spent \$2,591,309 on the JDE Upgrade, which created a \$591,309 unfavorable
14 variance when comparing the total actual capital spending to the OEB Approved amount. The
15 OEB Approved amount of \$2,000,000 was based on what was budgeted at the time of the 2017
16 Cost of Service Application. This budgeted amount was based on an external study and was for
17 an “as-is” upgrade. It did not include additional functionality that London Hydro ended up
18 implementing as part of this project (such as a time and labour module and foreign currency
19 transactions.) These enhancements contributed to the \$591,309 variance.

20 London Hydro proposes to incorporate \$863,770 in rate base in 2022 pertaining to this project
21 (an addition to opening net fixed assets comprised of \$2,591,309 in incremental capital net of
22 \$1,727,540 of accumulated depreciation). These amounts are included in columns E and K in the
23 2022 Fixed Asset Continuity Schedules filed in Tab “App.2-BA_Fixed Asset Cont” of the Chapter
24 2 Appendices.

25 *Hydro One CCRA True-Up Talbot and Buchanan*

26 London Hydro and Hydro One entered into a Connection and Cost Recovery Agreement (CCRA)
27 on January 26, 2006 for the construction of a second 230-28kV transformer station “Talbot TS
28 #2” and for the provision of four new feeder breaker positions at Buchanan TS. Talbot TS #2 and
29 the Buchanan feeder breakers went into service by December 2007. At the time of the 2017 Cost

1 of Service Application, London Hydro and Hydro One were disputing the settlement amount
2 between the two parties and were in the middle of negotiations (that began in 2012). In 2018,
3 London Hydro and HONI came to an agreement that London Hydro in fact did not owe HONI any
4 additional funds. This has created a \$500,000 favourable variance between the 2017 OEB
5 Approved amount and the actual capital spending (which was \$nil).

6 London Hydro is not proposing to incorporate any amount regarding this project into rate base in
7 2022.

8 Please refer to Section 9.4 for information on the true-up of these ACM projects, including details
9 on revenue requirement, disposition and rate riders.

2.8 CAPITALIZATION POLICY

As of January 1, 2015, London Hydro follows International Financial Accounting Standards (IFRS). Effective January 1, 2012, following a detailed review of the useful lives analysis conducted by Kinetrics, London Hydro implemented changes in accounting estimates related to useful lives of certain assets. These changes to depreciation and capitalization policies were filed and approved by the OEB in London Hydro's 2017 Cost of Service application (EB-2016-0091). London Hydro confirms that its capitalization policy is consistent with the OEB's regulatory accounting policies as set out for MIFRS as contained in the *Report of the Board on Transition to International Financial Reporting Standards* (EB-2008-0408) and the OEB's Accounting Procedures Handbook.

A copy of London Hydro's capitalization policy can be found in Appendix 2-4, at the end of this Exhibit. No significant changes have been made to the policy since the 2017 rebasing.

2.9 CAPITALIZATION OF OVERHEAD

London Hydro capitalizes three types of overhead expenses: Employee Benefits, the Fleet Department, and the Materials Management Department.

London Hydro has completed Appendix 2-D (Overhead Expense) as per Section 2.2.2.6 of the Filing Requirements. A copy is also provided as Appendix 2-5 within this Exhibit.

Employee Benefits

Employee benefit costs can be broken down into three groupings: Statutory (such as CPP, EI, EHT, WSIB), Active Employees (such as OMERS, health, dental, life insurance, long-term disability insurance, pension contributions) and Retired Employees (such as life insurance premiums, employee future benefit costs).

Total benefit costs are allocated amongst OM&A, capital and billable jobs, based on actual labour hours, by applying benefit rates. These rates are derived by comparing the relationship between estimated total benefits and estimated total base salaries for the year and calculating an appropriate percentage to ensure all benefit costs are accounted for.

London Hydro's fully burdened rate for full-time employees is 68.0%. This rate accounts for both the benefit costs mentioned above, as well as a factor for non-productive time (vacation, sick, etc.). This method ensures all employee-related benefits culminate in the proper OM&A/capital accounts, based on direct labour hours. See Table 2-55 below for complete information on various allocation rates.

Fleet Department

Fleet Department costs include labour, materials, fuel, repairs, vehicle depreciation, and other costs associated with maintaining London Hydro's fleet of vehicles and equipment. Hourly fleet burden rates are based on vehicle/equipment type and reviewed annually. Rates are calculated using an estimation of annual costs and usage per type of vehicle/equipment. These rates are allocated to capital and billable jobs based on actual vehicle/equipment usage, which is tracked by employee via timesheet. Fleet costs are also allocated to various OM&A Departments based

1 on vehicle availability. For example, a vehicle designated for the Health and Safety Department
2 would be allocated 40 hours/week of fleet burden, based on the respective vehicle's
3 predetermined rate.

4 *Materials Management Department*

5 Materials Management Department costs to be allocated include labour and benefits of the
6 employees who monitor inventory, issue materials and supplies, and oversee this department.
7 Non-capital allocations also include administrative costs such as telephone equipment and office
8 supplies. Costs are allocated using pre-determined allocation rates, based on type of project and
9 type of material. Allocation rates to capital are lower than non-capital due to IFRS restrictions
10 regarding costs being directly attributable to bringing an asset to the location and condition
11 necessary for it to operate in the manner intended by management. Table 2-55 below lists London
12 Hydro's allocation rates.

13

Table 2-55 – Allocation Rates**

LONDON HYDRO INC. COST ALLOCATION RATES	
Burden Type	Rate
Labour	
Full-Time	68.0%
Part-Time	22.0%
Materials Management	
Items >\$1k and cable/wire	
Capital	2.5%
Non-Capital	7.0%
Items <\$1k and non cable/wire	
Capital	5.0%
Non-Capital	12.0%

14

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**Fleet rates not included above; allocated using flat rate per vehicle type, not percentage allocation

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Overhead costs are reviewed on a regular basis and revised as required. Labour rates are updated depending on the different cost centres involved in activities, as each cost centre has its own level of employer costs and burden rates are developed corporately. Vehicle rates are updated annually to coincide with changes in budgeted amounts in the Fleet Services Department. Material rates are also reviewed on a regular basis and adjusted when necessary, since these rates can change depending on the value and types of product being handled. Changes in overhead rates since the 2017 Cost of Service Application are immaterial in amount.

2.10 COSTS OF ELIGIBLE INVESTMENTS FOR THE CONNECTION OF QUALIFYING GENERATION FACILITIES

There is significant renewable generation activity across London Hydro's distribution system. As of December 31, 2020, London Hydro has connected one RESOP project with 2.85MW, 297 microFITs (10 kW or less), 62 active renewable FIT generation projects, and 52 Net Metering projects with a total nameplate capacity of 21,350 kW.

London Hydro does not expect any capital expenditures related to renewable energy generation ("REG") in its DSP. There are no additional OM&A costs related to REG facilities as London Hydro is able to process all REG applications utilizing existing employees. Therefore, London Hydro does not require recovering costs incurred to make eligible investments as described in Section 79.1 of the Act and O. Reg. 330/09 under the Act.

Since London Hydro does not expect any capital expenditures related to REG, London Hydro has not completed nor filed Appendix 2-FA to Appendix 2-FC.

2.11 SERVICE QUALITY

London Hydro follows the Board's Reporting and Record Keeping Requirements Guideline to report its Service Quality Indicators ("SQI") annually. In accordance with the Filing Requirements, Appendix 2-G – Service Quality Indicators is included in Appendix 2-6 of this Exhibit. The table provides the performance measurements for the last five historical years 2016 through 2020. London Hydro confirms that the data values presented herein are consistent with our scorecard.

London Hydro has consistently performed within the range of acceptable performance over the previous five years with the exception of one indicator. The Appointment Scheduling indicator in 2018 was 82.75%, below the minimum standard of 90%. In 2019, the OEB released a guide entitled "RRR FILING GUIDE FOR ELECTRICITY DISTRIBUTORS'- REPORTING AND RECORD KEEPING REQUIREMENTS - (RRR)". This document clarified rules in the Distribution System Code. It was clarified that the "Appointments Scheduled" SQI is to only include customer interactions that require a specific appointment time or date with the customer. If an appointment is required we are to make an appointment within 5 days unless otherwise agreed upon. Similarly, the SQI "Appointments Met" defines the window of time the utility has around an appointment that has been scheduled. The majority of cable locates do not require an appointment date or time with a customer. This would exclude the large multiple locate requests from entities such as the City and utilities. This approach is consistent with the reporting methods used by other distribution companies, and has been reflected in the annual data reported to the OEB for our 2019 scorecard and onwards.

Reliability Performance

London Hydro tracks service reliability statistics SAIDI (System Average Interruption Duration Index) and SAIFI (System Average Interruption Frequency Index) including and excluding loss of supply related incidents and Major Event Days (MEDs). The following tables show results for the past five years as well as the five-year historical average as determined in the OEB Appendix 2-G included Appendix 2-6 of this Exhibit.

1 **Table 2-56 - System Reliability Performance Baseline excluding Loss of Supply and MED's**

Index	Excluding Loss of Supply and Major Event Days				
	2016	2017	2018	2019	2020
SAIDI	0.97	0.93	0.82	0.80	0.86
SAIFI	1.03	1.00	1.40	1.14	1.05
5 Year Historical Average					
SAIDI					0.874
SAIFI					1.123

3 **Table 2-57 - System Reliability Performance Baseline including MED's, excluding Loss of Supply**

Index	Including Major Event Days, Excluding Loss of Supply				
	2016	2017	2018	2019	2020
SAIDI	0.97	1.31	1.36	1.14	0.86
SAIFI	1.03	1.28	1.80	1.33	1.05
5 Year Historical Average					
SAIDI					1.127
SAIFI					1.297

5 **Table 2-58 - System Reliability Performance Baseline including Loss of Supply, excluding MED's**

Index	Including Loss of Supply, Excluding Major Event Days				
	2016	2017	2018	2019	2020
SAIDI	0.99	0.94	0.90	0.89	0.95
SAIFI	1.24	1.15	1.79	1.71	1.48
5 Year Historical Average					
SAIDI					0.933
SAIFI					1.476

7 **Table 2-59 - System Reliability Performance Baseline including Loss of Supply and MED's**

Index	Including Loss of Supply and Major Event Days				
	2016	2017	2018	2019	2020
SAIDI	0.99	1.42	1.44	1.37	0.95
SAIFI	1.24	1.51	2.20	2.09	1.48
5 Year Historical Average					
SAIDI					1.232
SAIFI					1.706

8

1 London Hydro experienced nine Major Event Days (MEDs) during the 2016-2020 period with
2 three MEDs occurring per year in 2017, 2018, and 2019. Of the nine MEDs, six were storm
3 related events (i.e. adverse weather, tree contacts, and lightning), two were Loss of Supply
4 events, and one was a Foreign Interference (vehicle accident) event. Customer interruptions
5 ranged from 13,919 for a storm related event in 2019 to 29,692 for a Loss of Supply event in
6 2019. The time to restore more than 90% of the customers affected ranged from 1 hour to 20
7 hours, however, the largest outages within the MED that impacted 51% to 97% of customers were
8 typically restored within 3-4 hours. All of the MEDs in 2019 were restored in less than 6 hours
9 and there were no Major Event Days in 2016 or 2020, and none for 2021 as of June 30, 2021.
10 The total customer-minutes of interruption (CMI) for each event are as follows:

11 March 8, 2017 – 2.20 million CMI
12 June 24, 2017 – 1.07 million CMI
13 August 10, 2017 – 1.26 million CMI
14 April 15, 2018 – 1.80 million CMI
15 May 4, 2018 – 2.24 million CMI
16 July 5, 2018 – 1.08 million CMI
17 March 13, 2019 – 1.27 million CMI
18 July 20, 2019 – 2.15 million CMI
19 July 21, 2019 – 1.18 million CMI

1 **Service Quality**

2 In addition to the reliability indices, London Hydro also measures Electricity Service Quality
3 Requirements (ESQRs).

4 The following table summarizes London Hydro's reported ESQRs for the historical years 2016
5 through 2020.

6 **Table 2-60 - Electricity Service Quality Requirements**

Indicator	OEB Minimum Standard	2016	2017	2018	2019	2020
Low Voltage Connections	90.0%	96.60%	97.56%	99.48%	99.32%	98.86%
High Voltage Connections	90.0%	100.00%	100.00%	100.00%	100.00%	100.00%
Telephone Accessibility	65.0%	67.00%	68.57%	70.33%	76.79%	73.41%
Appointments Met	90.0%	99.90%	99.87%	100.00%	100.00%	100.00%
Written Response to Enquires	80.0%	100.00%	100.00%	100.00%	100.00%	100.00%
Emergency Urban Response	80.0%	97.30%	96.46%	97.04%	98.29%	93.15%
Emergency Rural Response	80.0%	N/A	N/A	N/A	N/A	N/A
Telephone Call Abandon Rate	10.0%	3.10%	2.95%	3.02%	2.85%	3.82%
Appointment Scheduling	90.0%	98.79%	95.21%	82.75%	100.00%	100.00%
Rescheduling a Missed Appointment	100.0%	100.00%	100.00%	N/A	N/A	N/A
Reconnection Performance Standard	85.0%	99.20%	99.92%	99.95%	99.74%	100.00%

7

Appendix 2-1: Fixed Asset Continuity Schedules

Table 2-61 – 2017 Fixed Asset Continuity Schedule (OEB Appendix 2-BA)

CCA Class ²	OEB Account ³	Description ³	Cost				Accumulated Depreciation					Net Book Value		
			Opening Balance ⁴	Transfers from Reg Deferrals	Additions ⁴	Disposals ⁴	Closing Balance	Opening Balance ⁴	Transfers from Reg Deferrals	Additions	Disposals ⁴		Closing Balance	
	1809	Capital Contributions Paid	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CEC	1810	Intangible Wholesale Meters	\$ 1,293,406	\$ -	\$ -	\$ -	\$ -	\$ 337,201	\$ -	\$ 43,096	\$ -	\$ -	\$ 380,297	\$ 913,110
12	1811	Computer Software (Formally known as Account 1925)	\$ 23,701,916	\$ 401,104	\$ 4,189,320	\$ 5,808,784	\$ 22,483,555	\$ 11,200,972	\$ 173,901	\$ 4,821,635	\$ 5,808,784	\$ 10,387,724	\$ 12,095,831	
CEC	1812	Land Rights (Formally known as Account 1908)	\$ 428,760	\$ -	\$ 30,136	\$ -	\$ 458,896	\$ 234,639	\$ -	\$ 19,789	\$ -	\$ 254,428	\$ 204,468	
N/A	1805	Land	\$ 385,690	\$ -	\$ -	\$ -	\$ 385,690	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 385,690	
47	1808	Buildings	\$ 1,132,988	\$ -	\$ 248,921	\$ -	\$ 1,381,909	\$ 746,774	\$ -	\$ 12,453	\$ -	\$ 759,228	\$ 622,681	
13	1810	Leasehold Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
47	1815	Transformer Station Equipment >50 kV	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
47	1820	Distribution Station Equipment <50 kV	\$ 16,360,477	\$ -	\$ 176,649	\$ 4,231	\$ 16,532,895	\$ 7,281,218	\$ -	\$ 288,913	\$ 4,231	\$ 7,565,899	\$ 8,966,996	
47	1825	Storage Battery Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
47	1830	Poles, Towers & Fixtures	\$ 45,222,201	\$ -	\$ 1,200,322	\$ -	\$ 46,422,523	\$ 21,057,414	\$ -	\$ 723,885	\$ -	\$ 21,781,279	\$ 24,641,245	
47	1835	Overhead Conductors & Devices	\$ 64,306,862	\$ -	\$ 1,528,873	\$ -	\$ 65,835,735	\$ 25,077,749	\$ -	\$ 1,014,768	\$ -	\$ 26,092,516	\$ 39,743,219	
47	1840	Underground Conduit	\$ 48,923,410	\$ -	\$ 4,902,589	\$ 8,957	\$ 53,817,043	\$ 11,295,384	\$ -	\$ 785,181	\$ 8,957	\$ 12,071,589	\$ 41,745,454	
47	1845	Underground Conductors & Devices	\$ 93,046,796	\$ -	\$ 5,914,182	\$ 3,757,474	\$ 95,203,503	\$ 42,025,916	\$ -	\$ 3,395,275	\$ 3,757,474	\$ 41,663,717	\$ 53,539,786	
47	1850	Line Transformers	\$ 93,688,118	\$ 22,540	\$ 5,476,611	\$ 495,058	\$ 98,692,211	\$ 37,029,875	\$ 4,884	\$ 2,298,895	\$ 487,365	\$ 38,846,288	\$ 59,845,923	
47	1855	Services (Overhead & Underground)	\$ 32,568,408	\$ -	\$ 2,542,412	\$ 395	\$ 35,110,425	\$ 9,846,285	\$ -	\$ 742,071	\$ 35	\$ 10,588,322	\$ 24,522,104	
47	1860	Meters	\$ 28,480,190	\$ -	\$ 2,031,573	\$ 453,204	\$ 30,958,559	\$ 11,933,553	\$ -	\$ 1,680,905	\$ 453,204	\$ 13,161,254	\$ 16,897,304	
N/A	1905	Land	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
47	1908	Buildings & Fixtures	\$ 22,568,672	\$ -	\$ 882,775	\$ 358,996	\$ 23,992,451	\$ 10,354,408	\$ -	\$ 762,268	\$ 358,996	\$ 10,757,680	\$ 12,334,771	
13	1910	Leasehold Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
8	1915	Office Furniture & Equipment	\$ 651,484	\$ -	\$ 115,730	\$ 84,536	\$ 842,750	\$ 239,892	\$ -	\$ 136,157	\$ 84,536	\$ 291,514	\$ 391,165	
50	1920	Computer Equipment - Hardware	\$ 1,735,368	\$ -	\$ 230,674	\$ 464,181	\$ 1,501,860	\$ 773,449	\$ -	\$ 559,081	\$ 464,181	\$ 968,350	\$ 633,511	
10	1930	Transportation Equipment	\$ 12,775,781	\$ -	\$ 617,399	\$ 378,270	\$ 13,014,911	\$ 7,078,192	\$ -	\$ 892,631	\$ 378,270	\$ 7,592,553	\$ 5,422,358	
8	1935	Stores Equipment	\$ 304,757	\$ -	\$ 115,467	\$ 129,199	\$ 291,025	\$ 186,495	\$ -	\$ 19,476	\$ 129,199	\$ 55,772	\$ 235,252	
8	1940	Tools, Shop & Garage Equipment	\$ 931,604	\$ -	\$ 137,630	\$ 117,694	\$ 951,540	\$ 484,055	\$ -	\$ 115,398	\$ 117,694	\$ 481,759	\$ 469,782	
8	1945	Measurement & Testing Equipment	\$ 783,926	\$ -	\$ 180,181	\$ -	\$ 964,106	\$ 137,193	\$ -	\$ 103,665	\$ -	\$ 240,859	\$ 723,248	
38	1950	Power Operated Equipment	\$ 1,028,783	\$ -	\$ 249,328	\$ -	\$ 1,278,111	\$ 652,285	\$ -	\$ 116,871	\$ -	\$ 769,135	\$ 508,976	
8	1955	Communications Equipment	\$ 4,068,707	\$ -	\$ 1,011,008	\$ -	\$ 5,079,714	\$ 1,808,344	\$ -	\$ 311,912	\$ -	\$ 1,918,256	\$ 3,161,459	
8	1960	Miscellaneous Equipment	\$ 4,039	\$ -	\$ -	\$ -	\$ 4,039	\$ 547	\$ -	\$ 505	\$ -	\$ 1,052	\$ 2,987	
47	1970	Load Management Controls Customer Premises	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
47	1975	Load Management Controls Utility Premises	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
47	1980	System Supervisor Equipment	\$ 4,036,655	\$ -	\$ 740,238	\$ 32,509	\$ 4,744,384	\$ 1,166,813	\$ -	\$ 262,279	\$ 32,509	\$ 1,386,583	\$ 3,357,801	
47	1985	Miscellaneous Fixed Assets	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
47	1990	Other Tangible Property	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
47	1995	Contributions & Grants	\$ 39,262,043	\$ -	\$ -	\$ -	\$ 39,262,043	\$ 11,315,453	\$ -	\$ 899,701	\$ -	\$ 12,215,154	\$ 27,046,889	
N/A	2005	Property Under Finance Leases	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
43.2	2075	Renewable Generation	\$ 2,463,104	\$ -	\$ -	\$ -	\$ 2,463,104	\$ 549,352	\$ -	\$ 123,159	\$ -	\$ 672,511	\$ 1,790,593	
47	2440	Deferred Revenue ⁵	\$ 8,972,720	\$ -	\$ 5,205,870	\$ -	\$ 14,178,591	\$ 272,151	\$ -	\$ 279,829	\$ -	\$ 551,980	\$ 13,626,611	
		Sub-Total	\$ 452,687,339	\$ 423,643	\$ 27,316,147	\$ 12,093,487	\$ 468,333,642	\$ 189,667,362	\$ 178,785	\$ 18,404,719	\$ 12,085,435	\$ 195,801,431	\$ 272,532,211	
		Less Socialized Renewable Energy Generation Investments (input as negative)												
		Less Other Non Rate-Regulated Utility Assets (input as negative)	\$ 2,463,104	\$ -	\$ -	\$ -	\$ 2,463,104	\$ 549,352	\$ -	\$ 123,159	\$ -	\$ 672,511	\$ 1,790,593	
		Total PP&E	\$ 450,224,234	\$ 423,643	\$ 27,316,147	\$ 12,093,487	\$ 465,870,538	\$ 189,118,010	\$ 178,785	\$ 17,917,560	\$ 12,085,435	\$ 195,128,920	\$ 270,741,617	
		Depreciation Expense adj. from gain or loss on the retirement of assets (pool of like assets), if applicable ⁹												
		Total											\$ 17,917,560	

		Less: Fully Allocated Depreciation	
10	1930	Transportation	\$ 892,631
38	1950	Power Operated Equipment	\$ 116,871
47	2440	Deferred Revenue	\$ 279,829
1578		IFRS-GAAP PP&E Transitional Amounts	\$ 39,327
		Net Depreciation	\$ 17,227,213

Table 2-62 – 2018 Fixed Asset Continuity Schedule (OEB Appendix 2-BA)

CCA Class ²	OEB Account ³	Description ³	Cost					Accumulated Depreciation					Net Book Value	
			Opening Balance ⁶	Transfers from Reg Deferrals	Additions ⁴	Disposals ⁵	Closing Balance	Opening Balance ⁶	Transfers from Reg Deferrals	Additions	Disposals ⁵	Closing Balance		
	1609	Capital Contributions Paid	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CEC	1610	Intangible Wholesale Meters	\$ 1,293,406	\$ -	\$ -	\$ -	\$ 1,293,406	-\$ 380,297	\$ -	-\$ 43,098	\$ -	-\$ 423,393	\$ 870,014	
12	1611	Computer Software (Formally known as Account 1925)	\$ 22,483,555	\$ -	\$ 3,872,776	-\$ 5,379,811	\$ 20,976,520	-\$ 10,387,724	\$ -	-\$ 4,854,653	\$ 5,379,811	-\$ 9,862,566	\$ 11,113,954	
CEC	1612	Land Rights (Formally known as Account 1906)	\$ 458,896	\$ -	\$ 80,905	\$ -	\$ 539,801	-\$ 254,428	\$ -	-\$ 22,476	\$ -	-\$ 276,904	\$ 262,896	
N/A	1805	Land	\$ 385,660	\$ -	\$ -	\$ -	\$ 385,660	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 385,660	
47	1808	Buildings	\$ 1,381,909	\$ -	\$ 8,087	\$ -	\$ 1,389,995	-\$ 756,228	\$ -	-\$ 14,756	\$ -	-\$ 773,984	\$ 616,011	
13	1810	Leasehold Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
47	1815	Transformer Station Equipment >50 kV	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
47	1820	Distribution Station Equipment <50 kV	\$ 16,532,895	\$ -	\$ 90,997	-\$ 94,738	\$ 16,529,155	-\$ 7,565,899	\$ -	-\$ 292,748	\$ 94,738	-\$ 7,763,909	\$ 8,765,246	
47	1825	Storage Battery Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
47	1830	Poles, Towers & Fixtures	\$ 46,422,523	\$ -	\$ 1,725,693	\$ -	\$ 48,148,216	-\$ 21,781,279	\$ -	-\$ 751,421	\$ -	-\$ 22,532,700	\$ 25,615,516	
47	1835	Overhead Conductors & Devices	\$ 65,835,735	\$ -	\$ 2,712,572	\$ -	\$ 68,548,307	-\$ 26,092,516	\$ -	-\$ 1,056,351	\$ -	-\$ 27,148,867	\$ 41,399,440	
47	1840	Underground Conduit	\$ 53,817,043	\$ -	\$ 8,262,889	-\$ 27,541	\$ 62,052,390	-\$ 12,071,589	\$ -	-\$ 899,404	\$ 27,541	-\$ 12,943,451	\$ 49,108,939	
47	1845	Underground Conductors & Devices	\$ 95,203,503	\$ -	\$ 5,590,561	-\$ 4,131,787	\$ 96,662,276	-\$ 41,663,717	\$ -	-\$ 3,395,519	\$ 4,131,787	-\$ 40,927,448	\$ 55,734,828	
47	1850	Line Transformers	\$ 98,892,211	\$ -	\$ 5,364,284	-\$ 681,210	\$ 103,375,285	-\$ 38,846,288	\$ -	-\$ 2,485,494	\$ 681,210	-\$ 40,630,572	\$ 62,744,693	
47	1855	Services (Overhead & Underground)	\$ 35,140,425	\$ -	\$ 5,684,055	\$ -	\$ 40,824,480	-\$ 10,588,322	\$ -	-\$ 836,072	\$ -	-\$ 11,424,394	\$ 29,400,087	
47	1860	Meters	\$ 30,058,559	\$ -	\$ 1,269,294	-\$ 276,918	\$ 31,050,935	-\$ 13,161,254	\$ -	-\$ 1,789,884	\$ 212,931	-\$ 14,718,188	\$ 16,332,748	
N/A	1905	Land	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
47	1908	Buildings & Fixtures	\$ 23,092,451	\$ -	\$ 1,270,450	-\$ 76,138	\$ 24,286,765	-\$ 10,757,680	\$ -	-\$ 762,238	\$ 76,138	-\$ 11,443,781	\$ 12,842,984	
13	1910	Leasehold Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
8	1915	Office Furniture & Equipment	\$ 682,678	\$ -	\$ 290,852	-\$ 101,298	\$ 872,335	-\$ 291,514	\$ -	-\$ 139,494	\$ 101,298	-\$ 329,702	\$ 542,833	
50	1920	Computer Equipment - Hardware	\$ 1,501,860	\$ -	\$ 834,863	-\$ 631,317	\$ 1,505,207	-\$ 868,350	\$ -	-\$ 452,411	\$ 631,317	-\$ 689,444	\$ 815,764	
10	1930	Transportation Equipment	\$ 13,014,911	\$ -	\$ 841,465	-\$ 462,309	\$ 13,194,067	-\$ 7,592,553	\$ -	-\$ 932,243	\$ 456,641	-\$ 8,068,156	\$ 5,125,912	
8	1935	Stores Equipment	\$ 291,025	\$ -	\$ 28,813	\$ -	\$ 319,838	-\$ 56,772	\$ -	-\$ 33,188	\$ -	-\$ 88,960	\$ 230,877	
8	1940	Tools, Shop & Garage Equipment	\$ 951,540	\$ -	\$ 62,787	-\$ 101,662	\$ 912,665	-\$ 481,759	\$ -	-\$ 118,083	\$ 101,662	-\$ 478,179	\$ 434,485	
8	1945	Measurement & Testing Equipment	\$ 964,106	\$ -	\$ 152,423	\$ -	\$ 1,116,529	-\$ 240,859	\$ -	-\$ 123,124	\$ -	-\$ 363,983	\$ 752,547	
38	1950	Power Operated Equipment	\$ 1,278,111	\$ -	\$ -	-\$ 200,809	\$ 1,077,503	-\$ 786,135	\$ -	-\$ 118,376	\$ 194,308	-\$ 693,204	\$ 384,299	
8	1955	Communications Equipment	\$ 5,079,714	\$ -	\$ 2,285	\$ -	\$ 5,081,980	-\$ 1,918,256	\$ -	-\$ 354,061	\$ -	-\$ 2,272,317	\$ 2,809,663	
8	1960	Miscellaneous Equipment	\$ 4,039	\$ -	\$ -	\$ -	\$ 4,039	-\$ 1,052	\$ -	-\$ 605	\$ -	-\$ 1,557	\$ 2,482	
	1970	Load Management Controls Customer Premises	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
47	1975	Load Management Controls Utility Premises	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
47	1980	System Supervisor Equipment	\$ 4,744,384	\$ -	\$ 447,039	-\$ 361,225	\$ 4,830,199	-\$ 1,386,583	\$ -	-\$ 272,357	\$ 361,225	-\$ 1,297,715	\$ 3,532,483	
47	1985	Miscellaneous Fixed Assets	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
47	1990	Other Tangible Property	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
47	1995	Contributions & Grants	-\$ 39,262,043	\$ -	\$ -	\$ -	-\$ 39,262,043	\$ 12,215,154	\$ -	\$ 899,701	\$ -	\$ 13,114,855	-\$ 26,147,188	
N/A	2005	Property Under Finance Leases	\$ -	\$ -	\$ 2,318,969	\$ -	\$ 2,318,969	\$ -	\$ -	-\$ 57,974	\$ -	-\$ 57,974	\$ 2,260,995	
43.2	2075	Renewable Generation	\$ 2,483,104	\$ -	\$ 60,245	\$ -	\$ 2,523,349	-\$ 672,511	\$ -	-\$ 123,661	\$ -	-\$ 796,172	\$ 1,727,177	
47	2440	Deferred Revenue ⁵	-\$ 14,178,591	\$ -	-\$ 4,795,268	\$ -	-\$ 18,973,858	\$ 551,980	\$ -	\$ 411,680	\$ -	\$ 963,660	-\$ 18,010,199	
		Sub-Total	\$ 468,333,642	\$ -	\$ 35,776,895	-\$ 12,526,555	\$ 491,583,982	-\$ 195,801,431	\$ -	-\$ 18,578,173	\$ 12,450,600	-\$ 201,929,004	\$ 289,654,977	
		Less Socialized Renewable Energy Generation Investments (input as negative)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
43.2	2075	Less Other Non Rate-Regulated Utility Assets (input as negative)	-\$ 2,483,104	\$ -	-\$ 60,245	\$ -	-\$ 2,523,349	\$ 672,511	\$ -	\$ 123,661	\$ -	\$ 796,172	-\$ 1,727,177	
		Total PP&E	\$ 465,870,538	\$ -	\$ 35,716,650	-\$ 12,526,555	\$ 489,060,633	-\$ 195,128,920	\$ -	-\$ 18,454,512	\$ 12,450,600	-\$ 201,132,833	\$ 287,927,800	
		Depreciation Expense adj. from gain or loss on the retirement of assets (pool of like assets), if applicable ⁶												
		Total											-\$ 18,454,512	

			Less: Fully Allocated Depreciation	
10	1930	Transportation		-\$ 932,243
38	1950	Power Operated Equipment		-\$ 118,376
47	2440	Deferred Revenue		\$ 411,680
1576		IFRS-GAAP PP&E Transitional Amounts		IFRS-GAAP PP&E Transitional Amounts
			Net Depreciation	-\$ 17,815,573

Table 2-65 – 2021 FORECAST Fixed Asset Continuity Schedule (OEB Appendix 2-BA)

CCA Class ²	OEB Account ³	Description ³	Cost					Accumulated Depreciation					Net Book Value	
			Opening Balance ⁶	Transfers from Reg Deferrals	Additions ⁴	Disposals ⁵	Closing Balance	Opening Balance ⁶	Transfers from Reg Deferrals	Additions	Disposals ⁶	Closing Balance		
	1609	Capital Contributions Paid	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
CEC	1610	Intangible Wholesale Meters	\$ 1,293,406	\$ -	\$ -	\$ -	\$ 1,293,406	\$ 509,584	\$ -	\$ 43,100	\$ -	\$ 552,684	\$ 740,722	\$ 740,722
12	1611	Computer Software (Formally known as Account 1925)	\$ 23,435,565	\$ -	\$ 4,376,000	\$ 4,912,000	\$ 22,899,565	\$ 10,380,359	\$ -	\$ 4,917,500	\$ 4,912,000	\$ 10,385,859	\$ 12,513,706	\$ 12,513,706
CEC	1612	Land Rights (Formally known as Account 1906)	\$ 688,377	\$ -	\$ -	\$ 214,200	\$ 474,177	\$ 327,699	\$ -	\$ 29,700	\$ 214,200	\$ 143,199	\$ 330,978	\$ 330,978
N/A	1805	Land	\$ 379,690	\$ -	\$ -	\$ -	\$ 379,690	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 379,690	\$ 379,690
47	1808	Buildings	\$ 1,389,995	\$ -	\$ 46,000	\$ -	\$ 1,435,995	\$ 803,969	\$ -	\$ 15,600	\$ -	\$ 819,569	\$ 616,426	\$ 616,426
13	1810	Leasehold Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
47	1815	Transformer Station Equipment >50 kV	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
47	1820	Distribution Station Equipment <50 kV	\$ 16,573,405	\$ -	\$ 157,700	\$ -	\$ 16,731,105	\$ 8,186,384	\$ -	\$ 388,100	\$ -	\$ 8,574,484	\$ 8,156,621	\$ 8,156,621
47	1825	Storage Battery Equipment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
47	1830	Poles, Towers & Fixtures	\$ 52,662,367	\$ -	\$ 1,760,900	\$ -	\$ 54,423,267	\$ 24,165,887	\$ -	\$ 894,400	\$ -	\$ 25,060,387	\$ 29,362,879	\$ 29,362,879
47	1835	Overhead Conductors & Devices	\$ 75,605,392	\$ -	\$ 3,540,800	\$ -	\$ 79,146,192	\$ 29,391,426	\$ -	\$ 1,269,600	\$ -	\$ 30,660,026	\$ 48,486,166	\$ 48,486,166
47	1840	Underground Conduit	\$ 82,180,806	\$ -	\$ 7,087,900	\$ 7,200	\$ 89,268,406	\$ 15,155,895	\$ -	\$ 1,429,000	\$ 7,200	\$ 16,577,895	\$ 72,883,711	\$ 72,883,711
47	1845	Underground Conductors & Devices	\$ 102,828,087	\$ -	\$ 7,527,600	\$ 4,194,500	\$ 106,161,187	\$ 41,804,187	\$ -	\$ 3,483,400	\$ 4,194,500	\$ 41,083,087	\$ 65,088,100	\$ 65,088,100
47	1850	Line Transformers	\$ 111,124,719	\$ -	\$ 5,009,600	\$ -	\$ 116,134,319	\$ 45,143,951	\$ -	\$ 2,849,600	\$ -	\$ 47,993,551	\$ 68,140,768	\$ 68,140,768
47	1855	Services (Overhead & Underground)	\$ 50,877,891	\$ -	\$ 4,801,800	\$ -	\$ 55,679,691	\$ 13,606,018	\$ -	\$ 1,321,400	\$ -	\$ 14,927,418	\$ 40,752,272	\$ 40,752,272
47	1860	Meters	\$ 33,679,999	\$ -	\$ 1,192,000	\$ 251,700	\$ 34,620,299	\$ 18,056,779	\$ -	\$ 2,021,700	\$ 251,700	\$ 19,828,779	\$ 14,793,520	\$ 14,793,520
N/A	1905	Land	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
47	1908	Buildings & Fixtures	\$ 25,175,584	\$ -	\$ 2,770,000	\$ 655,000	\$ 27,290,584	\$ 11,153,862	\$ -	\$ 738,700	\$ 655,000	\$ 11,234,562	\$ 16,056,002	\$ 16,056,002
13	1910	Leasehold Improvements	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8	1915	Office Furniture & Equipment	\$ 1,270,267	\$ -	\$ 755,000	\$ 264,800	\$ 1,780,467	\$ 556,751	\$ -	\$ 313,800	\$ 264,800	\$ 605,751	\$ 1,154,716	\$ 1,154,716
50	1920	Computer Equipment - Hardware	\$ 1,315,919	\$ -	\$ 947,000	\$ 634,700	\$ 1,628,219	\$ 658,099	\$ -	\$ 588,300	\$ 634,700	\$ 611,899	\$ 1,016,530	\$ 1,016,530
10	1930	Transportation Equipment	\$ 14,853,629	\$ -	\$ 1,445,000	\$ 1,095,100	\$ 15,203,629	\$ 8,773,450	\$ -	\$ 1,056,400	\$ 1,093,000	\$ 8,736,850	\$ 6,466,879	\$ 6,466,879
8	1935	Stores Equipment	\$ 344,166	\$ -	\$ 15,000	\$ -	\$ 359,166	\$ 164,461	\$ -	\$ 39,700	\$ -	\$ 204,161	\$ 155,005	\$ 155,005
8	1940	Tools, Shop & Garage Equipment	\$ 987,170	\$ -	\$ 240,000	\$ 112,100	\$ 1,115,070	\$ 426,946	\$ -	\$ 134,500	\$ 112,100	\$ 449,346	\$ 665,725	\$ 665,725
8	1945	Measurement & Testing Equipment	\$ 1,343,478	\$ -	\$ 175,000	\$ 18,400	\$ 1,500,078	\$ 587,118	\$ -	\$ 178,100	\$ 18,400	\$ 746,818	\$ 753,260	\$ 753,260
38	1950	Power Operated Equipment	\$ 1,276,824	\$ -	\$ -	\$ -	\$ 1,276,824	\$ 822,288	\$ -	\$ 87,600	\$ -	\$ 909,888	\$ 366,936	\$ 366,936
8	1955	Communications Equipment	\$ 5,538,729	\$ -	\$ 550,000	\$ -	\$ 6,088,729	\$ 2,986,478	\$ -	\$ 427,500	\$ -	\$ 3,413,978	\$ 2,674,751	\$ 2,674,751
8	1960	Miscellaneous Equipment	\$ 61,115	\$ -	\$ 20,000	\$ -	\$ 81,115	\$ 10,898	\$ -	\$ 9,900	\$ -	\$ 19,798	\$ 61,316	\$ 61,316
47	1970	Load Management Controls Customer Premises	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
47	1975	Load Management Controls Utility Premises	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
47	1980	System Supervisor Equipment	\$ 5,892,666	\$ -	\$ 893,800	\$ 10,700	\$ 6,775,766	\$ 1,716,473	\$ -	\$ 358,900	\$ 10,700	\$ 2,064,673	\$ 4,711,093	\$ 4,711,093
47	1985	Miscellaneous Fixed Assets	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
47	1990	Other Tangible Property	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
47	1995	Contributions & Grants	\$ 39,262,043	\$ -	\$ -	\$ -	\$ 39,262,043	\$ 14,914,258	\$ -	\$ 900,000	\$ -	\$ 15,814,258	\$ 23,447,785	\$ 23,447,785
N/A	2005	Property Under Finance Leases	\$ 2,318,969	\$ -	\$ -	\$ -	\$ 2,318,969	\$ 173,923	\$ -	\$ 58,000	\$ -	\$ 231,923	\$ 2,087,046	\$ 2,087,046
43.2	2075	Renewable Generation	\$ 2,523,349	\$ -	\$ -	\$ -	\$ 2,523,349	\$ 1,054,538	\$ -	\$ 129,200	\$ -	\$ 1,183,738	\$ 1,339,611	\$ 1,339,611
47	2440	Deferred Revenue ⁵	\$ 30,171,171	\$ -	\$ 6,534,000	\$ -	\$ 36,705,171	\$ 2,166,438	\$ -	\$ 836,000	\$ -	\$ 3,002,438	\$ 33,702,733	\$ 33,702,733
		Sub-Total	\$ 546,188,332	\$ -	\$ 36,777,000	\$ 12,370,400	\$ 570,594,932	\$ 219,536,818	\$ -	\$ 21,042,700	\$ 12,368,300	\$ 228,211,218	\$ 342,383,714	\$ 342,383,714
		Less Socialized Renewable Energy Generation Investments (input as negative)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
43.2	2075	Less Other Non Rate-Regulated Utility Assets (input as negative)	\$ 2,523,349	\$ -	\$ -	\$ -	\$ 2,523,349	\$ 1,054,538	\$ -	\$ 129,200	\$ -	\$ 1,183,738	\$ 1,339,611	\$ 1,339,611
		Total PP&E	\$ 543,664,983	\$ -	\$ 36,777,000	\$ 12,370,400	\$ 568,071,583	\$ 218,482,280	\$ -	\$ 20,913,500	\$ 12,368,300	\$ 227,027,480	\$ 341,044,103	\$ 341,044,103
		Depreciation Expense adj. from gain or loss on the retirement of assets (pool of like assets), if applicable⁶												
		Total												\$ 20,913,500

		Less: Fully Allocated Depreciation	
10	1930	Transportation	\$ 1,056,400
38	1950	Power Operated Equipment	\$ 87,600
47	2440	Deferred Revenue	\$ 836,000
1576		IFRS-GAAP PP&E Transitional Amounts	
		Net Depreciation	\$ 20,605,500

Appendix 2-2: Policy Options for the Funding of Capital

Capital Module Applicable to ACM and ICM

Note: Depending on the selections made below, certain worksheets in this workbook will be hidden.

Version 1.0


Utility Name	London Hydro Inc.	
Assigned EB Number	EB-2021-0041	
Name of Contact and Title	Martin Benum, Director of Regulatory Affairs	
Phone Number	519-661-5800 ext. 5750	
Email Address	benumm@londonhydro.com	
Is this Capital Module being filed in a CoS or Price-Cap IR Application?	COS	Rate Year 2022
London Hydro Inc. is applying for:	ACM Approval	
Last COS OEB Application Number	EB-2016-0091	
The most recent complete year for which actual billing and load data exists	2020	
Current IPI	2.20%	
Stretch Factor Assigned to Middle Cohort*	III	
Stretch Factor Value	0.30%	
Price Cap Index	1.90%	

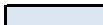
Based on the inputs above, the growth factor utilized in the Materiality Threshold Calculation will be determined by:


Revenues Based on 2022 Test Year Distribution Revenues

Revenues Based on 2020 Actual Distribution Revenues

Notes

 Pale green cells represent input cells.

 Pale blue cells represent drop-down lists. The applicant should select the appropriate item from the drop-down list.

 White cells contain fixed values, automatically generated values or formulae.

This Workbook Model is protected by copyright and is being made available to you solely for the purpose of filing your ICM application. You may use and copy this model for that purpose, and provide a copy of this model to any person that is advising or assisting you in that regard. Except as indicated above, any copying, reproduction, publication, sale, adaptation, translation, modification, reverse engineering or other use or dissemination of this model without the express written consent of the Ontario Energy Board is prohibited. If you provide a copy of this model to a person that is advising or assisting you in preparing the application or reviewing your draft rate order, you must ensure that the person understands and agrees to the restrictions noted above.

While this model has been provided in Excel format and is required to be filed with the applications, the onus remains on the applicant to ensure the accuracy of the data and the results.

**As per ACM/ICM policy, the middle cohort stretch factor is applied to all ACM/ICM applications.*

OEB policies regarding rate-setting and rebasing following distributor consolidations could allow a distributor to not rebase rates for up to ten years. A distributor could also apply for and receive OEB approval to defer rebasing. If a distributor is under Price Cap IR for more than four years after rebasing and applies for an ICM, this spreadsheet will need to be adapted to accommodate those circumstances. The distributor should contact OEB staff to discuss the circumstances so that a customized model can be provided.



Ontario Energy Board

Capital Module

Applicable to ACM and ICM

London Hydro Inc.

Select the appropriate rate classes as they appear on your most recent Board-Approved Tariff of Rates and Charges, excluding the MicroFit Class.

How many classes are on your most recent Board-Approved Tariff of Rates and Charges?

9

Select Your Rate Classes from the **Blue Cells** below. Please ensure that a rate class is assigned to each shaded cell.

	Rate Class Classification
1	RESIDENTIAL
2	GENERAL SERVICE LESS THAN 50 kW
3	GENERAL SERVICE 50 TO 4,999 KW
4	GENERAL SERVICE 1,000 TO 4,999 kW
5	STANDBY POWER
6	LARGE USE
7	STREET LIGHTING
8	SENTINEL LIGHTING
9	UNMETERED SCATTERED LOAD

Capital Module

Applicable to ACM and ICM

London Hydro Inc.

Input the billing determinants associated with London Hydro Inc.'s Revenues Based on 2022 Test Year Distribution Revenues. Input the current approved distribution rates. Sheets 4 & 5 calculate the NUMERATOR portion of the growth factor calculation.

2022 Test Year Distribution Revenues

Proposed Distribution Rates

Rate Class	Units	Billed Customers or Connections	Billed kWh	Billed kW (if applicable)	Monthly Service Charge	Distribution Volumetric Rate kWh	Distribution Volumetric Rate kW
RESIDENTIAL	\$/kWh	150,243	1,219,995,338		29.05		
GENERAL SERVICE LESS THAN 50 KW	\$/kWh	13,071	365,492,042		37.63	0.0125	
GENERAL SERVICE 50 TO 4,999 KW	\$/kW	1,511	1,336,134,398	3,363,562	177.11		3.2106
GENERAL SERVICE 1,000 TO 4,999 KW	\$/kW	9	30,252,424	72,330	1268.87		2.7740
STANDBY POWER	\$/kW			172,800	0.00		3.6809
LARGE USE	\$/kW	1	90,751,530	172,428	21517.55		2.4012
STREET LIGHTING	\$/kW	38,898	14,936,832	41,823	1.87		9.2941
SENTINEL LIGHTING	\$/kW	476	462,196	1,248	7.07		23.2436
UNMETERED SCATTERED LOAD	\$/kWh	1,539	5,323,401		2.98	0.0256	

Capital Module

Applicable to ACM and ICM

London Hydro Inc.

Calculation of 2022 Revenue Requirement. No input required.

Rate Class	2022 Test Year Distribution Revenues			Proposed Distribution Rates			Service Charge Revenue	Distribution Volumetric Rate Revenue kWh	Distribution Volumetric Rate Revenue kW	Revenues from Rates	Service Charge % Revenue	Distribution Volumetric Rate % Revenue kWh	Distribution Volumetric Rate % Revenue kW	Total % Revenue
	Billed Customers or Connections	Billed kWh	Billed kW (if applicable)	Monthly Service Charge	Distribution Volumetric Rate kWh	Distribution Volumetric Rate kW								
	A	B	C	D	E	F	G	H	I	J	K = G / J	L = H / J	M = I / J	N
RESIDENTIAL	150,243	1,219,995,338		29.05	0.0000	0.0000	52,382,750	0	0	52,382,750	100.0%	0.0%	0.0%	65.4%
GENERAL SERVICE LESS THAN 50 KW	13,071	365,492,042		37.63	0.0125	0.0000	5,902,266	4,586,590	0	10,488,856	56.3%	43.7%	0.0%	13.1%
GENERAL SERVICE 50 TO 4,999 KW	1,511	1,336,134,398	3,363,562	177.11	0.0000	3,2106	3,211,408	0	10,798,954	14,010,361	22.9%	0.0%	77.1%	17.5%
GENERAL SERVICE 1,000 TO 4,999 KW	9	30,252,424	72,330	1,268.87	0.0000	2,7740	137,038	0	200,647	337,686	40.6%	0.0%	59.4%	0.4%
STANDBY POWER			172,800	0.00	0.0000	3,6809	0	0	636,059	636,059	0.0%	0.0%	100.0%	0.8%
LARGE USE	1	90,751,530	172,428	21,517.55	0.0000	2,4012	258,211	0	414,043	672,253	38.4%	0.0%	61.6%	0.8%
STREET LIGHTING	38,898	14,936,832	41,823	1.87	0.0000	9,2941	871,355	0	388,708	1,260,063	69.2%	0.0%	30.8%	1.6%
SENTINEL LIGHTING	476	462,196	1,248	7.07	0.0000	23,2436	40,362	0	29,008	69,370	58.2%	0.0%	41.8%	0.1%
UNMETERED SCATTERED LOAD	1,539	5,323,401		2.98	0.0256	0.0000	55,045	136,016	0	191,060	28.8%	71.2%	0.0%	0.2%
Total	205,748	3,063,348,161	3,824,191				62,858,434	4,722,606	12,467,418	80,048,458				100.0%

Capital Module

Applicable to ACM and ICM

London Hydro Inc.

Applicants Rate Base

Average Net Fixed Assets

Gross Fixed Assets - Re-based Opening	\$ 576,170,598	A			
Add: CWIP Re-based Opening		B			
Re-based Capital Additions	\$ 41,742,000	C			
Re-based Capital Disposals		D			
Re-based Capital Retirements	-\$ 11,586,600	E			
Deduct: CWIP Re-based Closing		F			
Gross Fixed Assets - Re-based Closing	\$ 606,325,998	G			
Average Gross Fixed Assets			\$ 591,248,298		$H = (A + G) / 2$

Accumulated Depreciation - Re-based Opening	\$ 229,241,262	I			
Re-based Depreciation Expense	\$ 22,379,800	J			
Re-based Disposals		K			
Re-based Retirements	-\$ 11,586,600	L			
Accumulated Depreciation - Re-based Closing	\$ 240,034,462	M			
Average Accumulated Depreciation			\$ 234,637,862		$N = (I + M) / 2$

Average Net Fixed Assets

\$ 356,610,436 $O = H - N$

Working Capital Allowance

Working Capital Allowance Base	\$ 358,046,716	P			
Working Capital Allowance Rate	7.5%	Q			
Working Capital Allowance			\$ 26,853,504		$R = P * Q$

Rate Base

\$ 383,463,940 $S = O + R$

Return on Rate Base

Deemed Short Term Debt %	4.00%	T	\$ 15,338,558		$W = S * T$
Deemed Long Term Debt %	56.00%	U	\$ 214,739,806		$X = S * U$
Deemed Equity %	40.00%	V	\$ 153,385,576		$Y = S * V$

Short Term Interest	1.75%	Z	\$ 268,425		$AC = W * Z$
Long Term Interest	2.30%	AA	\$ 4,939,016		$AD = X * AA$
Return on Equity	8.34%	AB	\$ 12,792,357		$AE = Y * AB$

Return on Rate Base

\$ 17,999,797 $AF = AC + AD + AE$

Distribution Expenses

OM&A Expenses	\$ 44,778,000	AG			
Amortization	\$ 22,148,800	AH			
Ontario Capital Tax		AI			
Grossed Up Taxes/PILs	\$ 403,436	AJ			
Low Voltage		AK			
Transformer Allowance	\$ 717,510	AL			
		AM			
		AN			
		AO			
			\$ 68,047,747		$AP = \text{SUM} (AG : AO)$

Revenue Offsets

Specific Service Charges	-\$ 1,070,100	AQ			
Late Payment Charges	-\$ 1,635,400	AR			
Other Distribution Income	-\$ 2,370,100	AS			
Other Income and Deductions	-\$ 923,488	AT	-\$ 5,999,088		$AU = \text{SUM} (AQ : AT)$

Revenue Requirement from Distribution Rates

\$ 80,048,456 $AV = AF + AP + AU$

Rate Classes Revenue

Rate Classes Revenue - Total (Sheet 4) \$ 80,048,456 AW

Capital Module

Applicable to ACM and ICM

London Hydro Inc.

Input the billing determinants associated with London Hydro Inc.'s Revenues Based on 2020 Actual Distribution Revenues. This sheet calculates the DENOMINATOR portion of the growth factor calculation. Pro forma Revenue Calculation.

Rate Class	2020 Actual Distribution Revenues			Proposed Distribution Rates			Service Charge Revenue	Distribution Volumetric Rate Revenue kWh	Distribution Volumetric Rate Revenue kW	Total Revenue By Rate Class	Service Charge % Revenue	Distribution Volumetric Rate % Revenue kWh	Distribution Volumetric Rate % Revenue kW	Total % Revenue
	Billed Customers or Connections	Billed kWh	Billed kW	Monthly Service Charge	Distribution Volumetric Rate kWh	Distribution Volumetric Rate kW								
	A	B	C	D	E	F	G	H	I	J	K = G / J _{Total}	L = H / J _{Total}	M = I / J _{Total}	N
RESIDENTIAL	146,977	1,174,570,751		29.05	0.0000	0.0000	51,244,048	0	0	51,244,048	64.6%	0.0%	0.0%	64.6%
GENERAL SERVICE LESS THAN 50 kW	12,891	374,492,024		37.63	0.0125	0.0000	5,820,986	4,699,532	0	10,520,518	7.3%	5.9%	0.0%	13.3%
GENERAL SERVICE 50 TO 4,999 kW	1,534	1,371,744,687	3,432,957	177.11	0.0000	3,2106	3,260,291	0	11,021,750	14,282,041	4.1%	0.0%	13.9%	18.0%
GENERAL SERVICE 1,000 TO 4,999 kW	8	36,277,791	69,257	1,268.87	0.0000	2,7740	121,812	0	192,123	313,935	0.2%	0.0%	0.2%	0.4%
STANDBY POWER			172,800	0.00	0.0000	3,6809	0	0	636,059	636,059	0.0%	0.0%	0.8%	0.8%
LARGE USE	1	103,009,408	189,814	21,517.55	0.0000	2,4012	258,211	0	455,790	714,001	0.3%	0.0%	0.6%	0.9%
STREET LIGHTING	37,806	16,908,317	47,272	1.87	0.0000	9,2941	846,893	0	439,356	1,286,249	1.1%	0.0%	0.6%	1.6%
SENTINEL LIGHTING	520	534,360	1,452	7.07	0.0000	23,2436	44,093	0	33,739	77,832	0.1%	0.0%	0.0%	0.1%
UNMETERED SCATTERED LOAD	1,533	5,417,919		2.98	0.0256	0.0000	54,830	138,431	0	193,261	0.1%	0.2%	0.0%	0.2%
Total	201,270	3,082,955,257	3,913,552				61,651,163	4,837,962	12,778,816	79,267,941				100.0%

Capital Module

Applicable to ACM and ICM

London Hydro Inc.

Current Revenue from Rates

This sheet is used to determine the applicant's most current allocation of revenues (after the most recent revenue to cost ratio adjustment, if applicable) to appropriately allocate the incremental revenue requirement to the classes.

Rate Class	Proposed Base Rates in Current CoS Application			2022 Test Year Distribution Revenues			Current Base Service Charge Revenue	Current Base Distribution Volumetric Rate kWh Revenue	Current Base Distribution Volumetric Rate kW Revenue	Total Current Base Revenue	Service Charge % Total Revenue	Distribution Volumetric Rate % Total Revenue	Distribution Volumetric Rate % Total Revenue	Total % Revenue
	Monthly Service Charge	Distribution Volumetric Rate kWh	Distribution Volumetric Rate kW	Re-based Billed Customers or Connections	Re-based Billed kWh	Re-based Billed kW								
	A	B	C	D	E	F								
RESIDENTIAL	29.05	0	0	150,243	1,219,995,338	0	52,382,750	0	0	52,382,750	65.44%	0.00%	0.00%	65.4%
GENERAL SERVICE LESS THAN 50 kW	37.63	0.012549083	0	13,071	365,492,042	0	5,902,266	4,586,590	0	10,488,856	7.37%	5.73%	0.00%	13.1%
GENERAL SERVICE 50 TO 4,999 kW	177.11	0	3.210570698	1,511	3,336,134,398	3,363,562	3,211,408	0	10,798,954	14,010,361	4.01%	0.00%	13.49%	17.5%
GENERAL SERVICE 1,000 TO 4,999 kW	1268.87	0	2.774044037	9	30,252,424	72,330	137,038	0	200,647	337,686	0.17%	0.00%	0.25%	0.4%
STANDBY POWER	0.00	0	3.680894791	0	0	172,800	0	0	636,059	636,059	0.00%	0.00%	0.79%	0.8%
LARGE USE	21517.55	0	2.401249118	1	90,751,530	172,428	258,211	0	414,043	672,253	0.32%	0.00%	0.52%	0.8%
STREET LIGHTING	1.87	0	9.294130919	38,898	14,936,832	41,823	871,355	0	388,708	1,260,063	1.09%	0.00%	0.49%	1.6%
SENTINEL LIGHTING	7.07	0	23.24362103	476	462,196	1,248	40,362	0	29,008	69,370	0.05%	0.00%	0.04%	0.1%
UNMETERED SCATTERED LOAD	2.98	0.025550545	0	1,539	5,323,401	0	55,045	136,016	0	191,060	0.07%	0.17%	0.00%	0.2%
Total							62,858,434	4,722,606	12,467,418	80,048,458				100.0%

Capital Module

Applicable to ACM and ICM

London Hydro Inc.

No Input Required.

Preliminary Materiality Threshold Calculation

$$\text{Threshold Value (\%)} = 1 + \left[\left(\frac{RB}{d} \right) \times (g + PCI \times (1 + g)) \right] \times ((1 + g) \times (1 + PCI))^{n-1} + 10\%$$

Cost of Service Rebasing Year	2022	
Price Cap IR Year in which Application is made	COS	<i>n</i>
Price Cap Index	1.90%	<i>PCI</i>
Growth Factor Calculation		
Revenues Based on 2022 Test Year Distribution Revenues	\$80,048,458	
Revenues Based on 2020 Actual Distribution Revenues	\$79,267,941	
Growth Factor	0.49%	<i>g (Note 1)</i>
Dead Band	10%	
Average Net Fixed Assets		
Gross Fixed Assets Opening	\$ 576,170,598	
Add: CWIP Opening	\$ -	
Capital Additions	\$ 41,742,000	
Capital Disposals	\$ -	
Capital Retirements	-\$ 11,586,600	
Deduct: CWIP Closing	\$ -	
Gross Fixed Assets - Closing	\$ 606,325,998	
Average Gross Fixed Assets	\$ 591,248,298	
Accumulated Depreciation - Opening	\$ 229,241,262	
Depreciation Expense	\$ 22,379,800	
Disposals	\$ -	
Retirements	-\$ 11,586,600	
Accumulated Depreciation - Closing	\$ 240,034,462	
Average Accumulated Depreciation	\$ 234,637,862	
Average Net Fixed Assets	\$ 356,610,436	
Working Capital Allowance		
Working Capital Allowance Base	\$ 358,046,716	
Working Capital Allowance Rate	8%	
Working Capital Allowance	\$ 26,853,504	
Rate Base	\$ 383,463,940	<i>RB</i>
Depreciation	\$ 22,379,800	<i>d</i>

Threshold Value (varies by Price Cap IR Year subsequent to CoS rebasing)

Price Cap IR Year 2023	151%
Price Cap IR Year 2024	152%
Price Cap IR Year 2025	153%
Price Cap IR Year 2026	154%
Price Cap IR Year 2027	155%
Price Cap IR Year 2028	156%
Price Cap IR Year 2029	157%
Price Cap IR Year 2030	159%
Price Cap IR Year 2031	160%
Price Cap IR Year 2032	161%

Threshold CAPEX

Price Cap IR Year 2023	\$ 33,827,367
Price Cap IR Year 2024	\$ 34,048,552
Price Cap IR Year 2025	\$ 34,275,049
Price Cap IR Year 2026	\$ 34,506,986
Price Cap IR Year 2027	\$ 34,744,494
Price Cap IR Year 2028	\$ 34,987,705
Price Cap IR Year 2029	\$ 35,236,758
Price Cap IR Year 2030	\$ 35,491,792
Price Cap IR Year 2031	\$ 35,752,951
Price Cap IR Year 2032	\$ 36,020,383

Threshold Value × d

Note 1: The growth factor *g* is annualized, depending on the number of years between the numerator and denominator for the calculation. Typically, for ACM review in a cost of service and in the fourth year of Price Cap IR, the ratio is divided by 2 to annualize it. No division is normally required for the first three years under Price Cap IR.

Appendix 2-3: London Hydro CIS Strategy: EY Study



**London Hydro
CIS Strategy**

Board Presentation
17 December 2019
Updated April 2021

Introduction to April 2021 Update to the CIS Strategy Report

- In October to December 2019, EY conducted an analysis of Customer Information and Billing System (CIS) options and developed the go-forward CIS roadmap for London Hydro, working collaboratively with the London Hydro team and culminating in the December 2019 Board Presentation report summarized and selectively updated in the following pages.
- At the time that the CIS analysis was conducted, SAP's declared date for end of support for the ECC / IS-U CIS platform was end of December 2025. In order to migrate on to new SAP S/4HANA CIS platform in advance of 2025, to mitigate the risk of contending for internal and System Integrator (SI) resources with other, larger Utilities also migrating to SAP S/4HANA to avoid being out of support and also to include contingency in the project schedule, the CIS roadmap per the December 2019 report included SI selection and procurement in 2020 - 2021 and implementation in 2021 - 2022.
- SAP subsequently extended its support window for the ECC / IS-U CIS platform until at least the end of December 2027.
- Additionally in 2020 to 2021 London Hydro did further work on defining its broader technology roadmap and priorities related to Customer Experience, including additional opportunities to leverage the new SAP S/4HANA CIS platform to support a number of London Hydro's Customer Experience objectives.
- As a result of the extended support window for the current CIS and these opportunities to leverage the CIS implementation to support additional Customer Experience objectives, London Hydro has updated its CIS roadmap, to select its SI partner in 2022 and implement in 2022 and 2023. These updates are reflected in updated versions of slides 7 and 9 below.

Introduction

Developing a CIS strategy

[

London Hydro (LH)'s current CRM and Billing (Customer Relationship and Billing) solution will no longer be supported post 2025 [now extended to 2027] which presents a technology obsolescence risk. Due to the complexity of these types of solutions, LH approached the market to better understand the magnitude of the risk in addition to what mitigations can address the risk via the development of a CIS strategy.

EY was selected to partner with LH to develop a CIS strategy aligned to corporate goals that would address current pain points and meet the needs of tomorrow, add value to the business and reduce LH's CIS platform complexity and cost of ownership.

Over a period of 10 weeks, EY carried out the following scope of work:

1. Conducted a **review** of London Hydro current CIS solutions (Customer Relationship Management, billing and meter data management), pain points and future vision along with market scan to determine what CIS are deployed at other North American utility companies. As a part of the review, EY conducted 15 workshops and meetings with five departments of Customer Service, Finance, Device Management, Billing and IT and met with LH leadership
2. Conducted a **review** of London Hydro's current bill imaging solution provided by an external 3rd party
3. Worked with London Hydro to conduct a business case driven options analysis to select the most feasible option
4. Collaborated with London Hydro to develop the **roadmap and the supporting business case** for the selected CIS strategy

The objective of EY's work was to deliver a pragmatic CIS strategy and business case for London Hydro execution that not only supports the future growth for London Hydro, but also meets the needs of the future customer.

Our observations of LH's current CIS landscape

LH is providing reliable electricity services and positive customer experience

Key highlights from our workshops include:



High accuracy in processing transactions

London achieved a billing accuracy of 99.8%, strongest quartile for cost per customer in the province



Customer-focused services

LH has achieved first contact resolution of 99.6% and an overall customer satisfaction rating of A



Stable CIS environment

Established processes around customer service, billing, device management and finance to support ecosystem



Enhanced customer experience and engagement

LH has invested in initiatives to meet customer needs such as the web-based MyLH portal for self service, Trickl app for energy management and conservation, Builder's Portal, Property Management Portal for managing tenancies and Green Button for energy usage data management

In addition, LH have realized opportunities to further streamline capabilities that include:

- ▶ Exploring alternative bill imaging solutions
- ▶ Review and implement new features in EHP8
- ▶ Optimizing collections and dunning process
- ▶ Improve service order management process for engineering and maintenance
- ▶ Improve settlement and finance processes

We advise LH to hold any investments in current system unless absolutely necessary. LH will need to assess and prioritize the mentioned initiatives

Case for change

Lack of support for current CIS platform rules out the option of retaining the status quo

By 2025 [now extended to 2027], the current instance of SAP will no longer be supported. With an unsupported system, there are potential risks related to critical system updates, security and technical support.

Implications for maintaining current system

Changing customer expectations

Digital technology is influencing customer expectations and behaviour. A legacy system may lack the capabilities to adapt to increasing customer demands for more granular data

Inhibit digital innovation

A legacy SAP system may inhibit LH's ability to leverage improvements to drive innovation or would require LH to build a complex environment around the legacy SAP instance to support innovations

Exposure to security vulnerabilities

Without critical system updates, LH will be vulnerable to security threats that may expose customer information in an ever increasing digital and connected environment.

Regulatory and compliance issues

A legacy system may have compliance issues as OEB regulations and programs continually change

Resourcing challenges

It would be increasingly difficult for LH to find new resources to continue supporting SAP in house and retention of existing resources will be challenging as resources inherently want to 'skill up'

Opportunities for replacing current system



Establish integrated customer interaction management across departments for a 360 degree view of the customer



Respond to increasing customer demand for personalized, real-time data



Harmonize established processes across LH departments and align to industry best practices



Complement LH's digital agenda



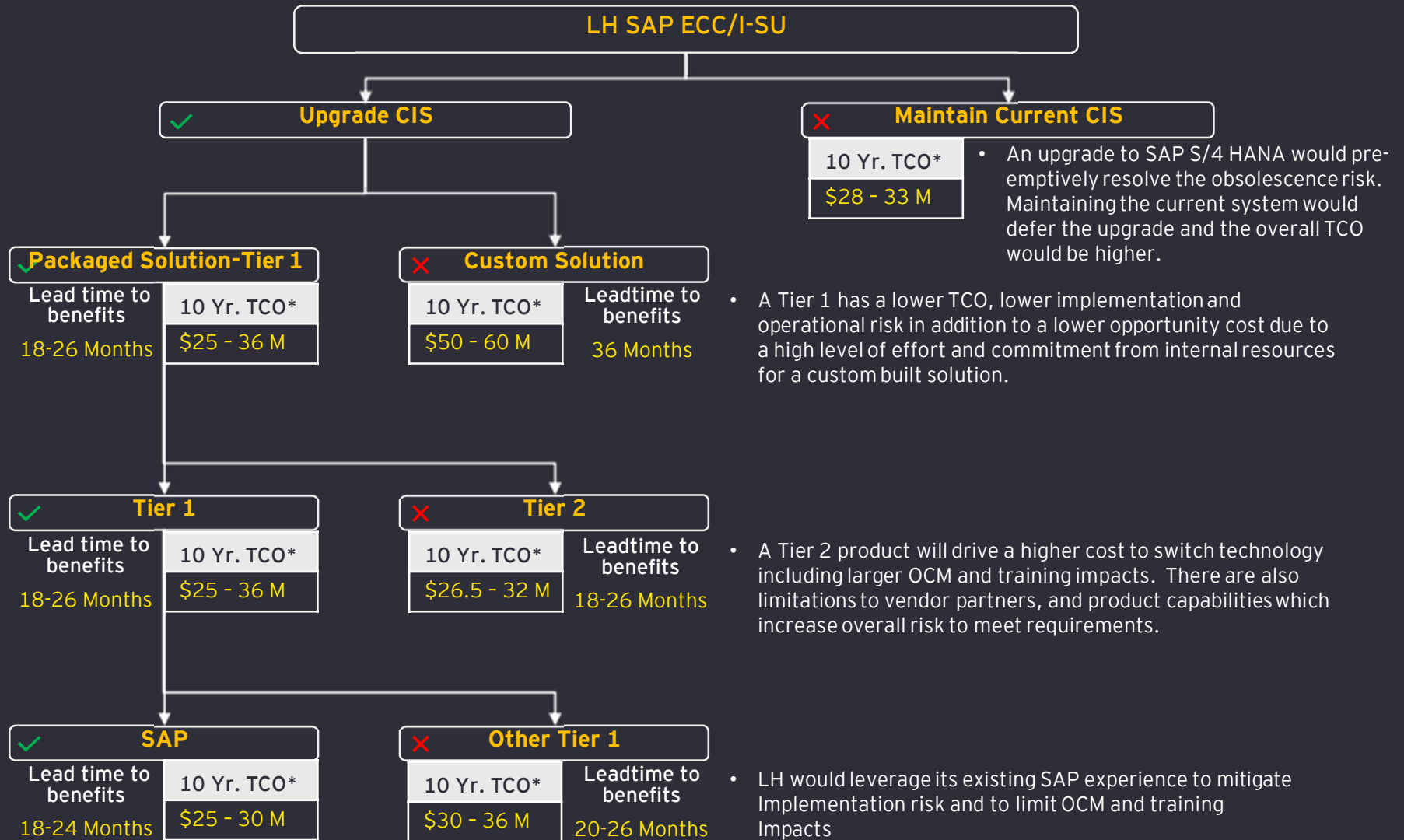
Enhance data management and analytics at LH



Manage resource risk and resource dependency

High-level CIS options decision tree

Compared to other solutions, upgrading to the latest SAP platform is the preferred option



Roadmap for future S/4 HANA implementation











The S/4 HANA implementation will be a technical and functional upgrade from ECC/IS-U

By 2022, market forces are expected to drive significant development in SAP accelerators and SI experience in SAP S/4 HANA implementations. An implementation in 2023 will allow LH to take advantage of these developments, mitigate implementation risks and allow for runway to prepare for CIS go live at the end of 2023.

	2021		2022		2023	
	H1	H2	H1	H2	H1	H2
Business process, data management & project management consultant selection & contracting	▶					
Data Model and Management, focused on S/4HANA	▶					
Solution and SAP Build Systems Integrator selection and contracting			▶			
Future State Architecture (SAP Maturity Check)			▶			
CIS Design and Implementation			▶		▶	

Risks and mitigation strategies

Strategic planning and preparation needed to mitigate people, process and technology risks


	Risk	Mitigation Strategy
 <p>People</p>	 <p>Internal resistance to change</p>	Develop robust change management strategy and plan to promote communication of change impacts and drive awareness of project goals to all relevant stakeholders
	 <p>Ability to recruit SAP resources locally</p>	Focus on training and reskilling internal resources; assess current end-user skillset and budget to staff project with offshore resources
	 <p>Key person dependencies</p>	Develop an enterprise wide documentation for critical business and technology processes; create cross functional teams to facilitate interdepartmental communication and mitigate single point of failure
 <p>Process</p>	 <p>Data duplication and inconsistencies across multiple systems</p>	Identify system of record for enterprise entities, standardize information sharing across multiple application and business units; develop inventory of processes and interfaces
	 <p>Regulatory changes</p>	Maintain routine communication with regulators and key governance structure to respond to regulatory changes appropriately
	 <p>Lack of common data definitions</p>	Define and socialize an enterprise data dictionary; implement enterprise governance around process changes, data design, documentation and ongoing support
 <p>Technology</p>	 <p>Inability to scale and adapt to customer demands</p>	Collaborate with industry consultants and SAP vendor to design a scalable CIS solution to address evolving industry trends and increasing customer demand


Recommendations for LH

Key features, outcomes and risks

Through our observations and analysis of LH's current state, our recommendation includes the following:

- ▶ Upgrade to SAP S/4 HANA cloud-based platform in 2023 to take advantage of the following:
 - ▶ Higher likelihood for advantageous pricing (SI and software)
 - ▶ Resource availability to support the upgrade
 - ▶ Minimize risk due to obsolescence
- ▶ Prioritize process standardization (where applicable) and master data management prior to implementation
- ▶ Define and socialize an enterprise data dictionary
- ▶ Implement enterprise governance around process changes, data design, documentation and ongoing support

 Key outcomes
Mitigating future technology risks As end of life for LH's current CIS approaches, a SAP S/4 HANA upgrade will mitigate the risks associated with technology obsolescence
Enhanced customer engagement Accurate, real-time consumption data to meet customer demands with increasing analytical capabilities
System scalability and flexibility Ability to support current needs today and tomorrow by continually enhancing service capabilities to meet customer needs
Process standardization where applicable Opportunity to streamline and reduce resource dependencies for critical processes

 Key risks
Organizational impact As multiple departments across the organization will be affected, proper governance and change management will be required
Training An updated CIS system will require training and process changes for end users
Implementation effort Significant time and effort is required to ensure a successful implementation
Skilled resources Experienced implementation resources with industry knowledge is essential to prevent cost overrun

Estimated project costs for S/4 HANA implementation

Accelerators across the SI network in 2022-3 drive LH costs to the lower end of benchmarks

The total implementation costs will be influenced by cost levers which include (but not limited to) the level of transformation (minimal to small), level of customization (for non-regulatory purposes), degree of interface rationalization, data conversion efforts and training of internal resources

CAPEX	CAD*	OPEX	CAD*
Total One-time Implementation Cost: Includes SI Labour cost, Hardware / Infrastructure cost, Initial setup cost, Contingency, Travel & Sundry expenses	\$14.5 - 18.5M	Annual operational Expenses (incremental): Includes annual SAP subscription fee, Internal IT Support cost & 3 rd party testing	\$0.4M - 0.5M

Typical benchmark for CIS implementation is approximately \$80 - 130 CAD/customer

Utility with 380K customers (2 services, de-reg)
\$30M CAD

Utility with 500K customers (single service, regulated)
\$31M CAD

*All costs are for illustrative purposes only. The estimates are based on current market costs and might be impacted by SI resourcing costs in 2021. Final costs will also depend on finalized requirements, scope of work, solution architecture and vendor discount. These are rough order of magnitude costs with a variance of +/- 30%.

**TCO are illustrative costs that incorporate implementation costs Subscription/ licence fees and LH support costs

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Appendix 2-4: Capitalization Policy

CAPITAL ASSETS ACCOUNTING POLICIES AND PROCEDURES

(Property, Plant and Equipment and Intangible Assets)

OVERVIEW

London Hydro applies International Financial Reporting Standards (IFRS), as identified in IFRS 1 First Time Adoption of IFRS and in IAS 16 Property, Plant and Equipment (PP&E), for the following general capitalization principles and procedures.

Background

On February 13, 2008, the Canadian Accounting Standards Board (“AcSB”) officially confirmed the requirement for publicly accountable enterprises to adopt IFRS for financial reporting purposes in 2011. However, deferrals were granted due to issues surrounding rate-regulated accounting for regulatory assets and liabilities.

London Hydro’s eventual and actual transition date to IFRS was January 1, 2015 with 2014 amounts being restated for comparative purposes.

Up to and including the date of transition to IFRS, Canadian Generally Accepted Accounting Principles (CGAAP), and in particular CICA Handbook (Sections 3061 to 3064), and the guidelines as specified in the Ontario Energy Board (OEB) Accounting Procedures Handbook (APH) (Article 410) were the basis for general capitalization principles and procedures.

To ease in the transition from CGAAP to IFRS and to help with Cost of Service filings, London Hydro implemented the following required IFRS changes acceptable under the CGAAP accounting standard effective January 1, 2012, as follows:

- Capital assets were segregated into more intricate components and new life spans were applied;

- Materials Management overhead burdens were reduced to consider direct labour only. (All other expenditures cannot be tied to a specific item so they are considered general and administrative in nature under MIFRS); and
- Labour overhead burdens were reduced slightly to exclude the capitalization of costs associated with training employees.

GENERAL CAPITALIZATION POLICY

1.0 PURPOSE

This document describes the accounting policies and processes set for the appropriate classification of London Hydro's expenditures and provides guidelines to assist in determining whether expenditures are capitalized and recorded to the balance sheet (capital assets) or expensed to operations in the period incurred (expensed).

The accounting policies and processes document is to permit accurate recognition of expenditures as either capital assets or operating expenses which is necessary for meeting the financial reporting requirements for IFRS and of the OEB, to provide accurate financial reporting to management and our shareholder, and to prepare meaningful budgets.

It should also be noted that capitalized expenditures attempt to provide for an equitable allocation of cost among existing and future customers as the assets are used.

2.0 ACCOUNTING POLICY

2.1 Recognition Principle

An *item* of Property, Plant and Equipment should be recognized as a capital asset, if and only if, it is probable that *future economic benefits* associated with the asset will flow to the Company, and the cost of the item can be measured reliably. (IAS 1 67.74 a and b)

Intangible assets are also considered capital assets under this criteria and are recognized as identifiable non-monetary assets that lack physical substance. (IAS 38.8)

Other Criteria for recognition as a capital asset include:

Expenditures incurred to purchase or to build tangible or intangible assets that will provide *benefits lasting beyond one year* to the Company will be capitalized.

Expenditures incurred to improve (betterment) an existing asset will be capitalized if it is probable that future economic benefits will flow to the Company. Future economic benefits are demonstrated by the expenditure extending the asset's useful life/lifespan or increasing the asset's potential productivity/capacity or potentially lowering operating costs.

London Hydro's capital assets typically include electric plant, transmission, generation and distribution facilities, meters, vehicles, office furniture, computer hardware and other equipment.

Intangible assets generally represent land rights, capital contributions paid to Hydro One and computer software.

Expenditures for repairs and/or maintenance designed to maintain an asset in its original state are not capital expenditures and should be charged to an operating account.

In the event of uncertainty surrounding the determination of a cost to be capital or operating or the application of materiality limits, if any exist, the Finance Department or the CFO should be consulted.

2.2 Measurement

Whether capital assets are purchased or constructed by the Company, they are stated at cost and include expenditures that are directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended.

The cost of self-constructed assets includes direct materials, initial delivery and assembly, labour, employee benefits, professional fees and any other costs directly attributable to bringing the asset to a working condition for its intended use. Other costs could include expenditures *directly attributable* to the asset from engineering, overheads, contracted services, and interest or borrowing costs.

Overheads are identified as being costs that support capital and operating activities, specifically within Supply Chain Management, Fleet Operations and Labour costing. Similarly, expenditures

included in Overheads must be reviewed to determine whether they are “directly attributable” to bringing the asset to the location and working condition for its intended use (IAS 16.16 b). Interest or borrowing costs should be capitalized on qualifying projects where construction activity extends over one year.

Costs that are not included in the cost of an item of PP&E include training costs, administration and other general overhead costs, feasibility studies conducted prior to project approval.

As part of London Hydro’s transition to IFRS, items of PP&E and Intangibles acquired prior to the transition date have been restated at deemed cost, which represents the carrying amount of these assets on the transition date, January 1, 2014.

2.3 Amortization / Depreciation

Depreciation is recognized in profit or loss on a straight-line basis over the estimated useful life of each part or component of an item of PP&E that is significant in relation to the total cost of the item. PP&E are considered tangible assets. Land and perpetual land rights are not depreciated. Finite lived intangible assets are amortized over their estimated useful life (IAS 38).

Construction-in-progress assets are not amortized until the item of PP&E is “**available for use**” (in its location and condition necessary for it to be capable of operating in the manner intended by management) (IAS 16.55).

Depreciation methods, useful lives and residual values are reviewed annually. Changes in useful life and residual values resulting from this review will be accounted for on a prospective basis as a change in accounting estimate in accordance with IAS 8.

Depreciation of an asset ceases when the asset is derecognized. (IAS 16.55). Depreciation does not cease when the asset is idle or retired from active use except when the asset is classified as held for sale.

2.4 Derecognition (Retirements and Disposals)

An item of PP&E or **Intangibles** will be removed from the capital assets on the balance sheet when it is taken out of service, or abandoned where no future benefits are expected or when sold. The resulting loss equal to its net book value less disposal costs will be recognized in profit and loss.

In the case of a sale of an item of PP&E or Intangibles, gains and losses are determined by comparing the proceeds from the disposal with the net book value of the item disposed with the gain or loss recognized in profit or loss. (IAS 16.68)

Derecognition will follow materiality limits to avoid undue administrative burden where costs may outweigh the benefits. For assets which cannot be individually identified, *this materiality limit has been set by London Hydro to \$10,000* in that an item will not be removed from PP&E where its net book value is equal to or less than this limit. This threshold takes into consideration, and assists in offsetting for, those assets in service that have exceeded their life expectancy.

This above-noted materiality limit does not apply where an individual asset record is maintained. For example, in the case of a vehicle.

2.5 Impairments

At the end of each annual reporting period, the Company must assess whether there is any indication that an asset may be impaired, and if so, determine and measure the impairment loss (IAS 36.9).

An item of PP&E or intangible asset is considered impaired if objective evidence indicates that one or more events have had a negative effect on the estimated future cash flows of the item. IAS 36.12 (f) states that a plan to dispose of an asset before the previously expected date is an indicator of impairment that triggers the calculation of the asset's recoverable amount for the purpose of determining whether the asset is impaired. Further indications of possible impairment are reflected below.

Indications of Impairment [IAS 36.12]

External sources:

- market value declines
- negative changes in technology, markets, economy, or laws
- increases in market interest rates

Internal sources:

- obsolescence or physical damage
- asset is part of a restructuring or held for disposal

- worse economic performance than expected

The above list is not intended to be exhaustive. [IAS 36.13]

If there is an indication that an impairment loss on assets exists, the recoverable amount is estimated. The impairment loss is the amount by which the asset's carrying amount or net book value exceeds its recoverable amount. The impairment loss is recognized in profit or loss.

3.0 DEFINITIONS

3.1 Tangible Assets

Property, Plant and Equipment as set out in IAS 16.6 indicates that they are a tangible item that:

- are held for use in the production or supply of goods or services, for rental to others, or for administrative purposes; and
- are expected to be used during more than one period.

3.2 Intangible Assets

An intangible asset is an identifiable non-monetary asset without physical substance. An asset is a resource that is controlled by the entity as a result of past events (for example, purchased or self-creation) and from which future economic benefits (inflows of cash or other assets) are expected.

[IAS 38.8] Thus, the three critical attributes of an intangible asset are:

- identifiable
- control (power to obtain benefits from the asset) resulting from a past event
- future economic benefits (such as revenues or reduced future costs)

Identifiable: an intangible asset is identifiable when it: (IAS 38.12) is separable (capable of being separated and sold, transferred, licensed, rented, or exchanged, either individually or together with a related contract) or arises from contractual or other legal rights, regardless of whether those rights are transferable or separable from the entity or from other rights and obligations.

3.3 Betterment

A betterment is defined as the cost incurred to enhance the service potential of a capital asset. It can include the increasing of the capacity of the asset, lowering associated operating costs,

improving the quality of output or extending the asset's useful life. Expenditures for betterments are capitalized if the capital asset will provide future economic benefit to the Company (see 4.1 for materiality limits as to betterments).

3.4 Repair

A repair is a cost which is incurred in the maintenance of the existing service potential of a capital asset. These costs are normally wear and tear in the normal use of the capital asset and do not enhance the service life of the asset. Repair costs are expensed in the period in which they occur.

3.5 Administrative and other general overhead

IAS 16.19 (d) explicitly prohibits capitalization of administration and other general overhead costs (“G&A”). IAS 16 does not define administration and other general overhead costs nor is it defined elsewhere in IFRS literature and therefore requires the application of judgment to identify such costs. In considering whether a cost is in the nature of G&A, the nature of the cost itself is not determinative. Rather, it is the specific facts and circumstances surrounding the cost at an entity and the entity’s ability to demonstrate that the cost is directly attributable to an item of PP&E.

G&A costs typically benefit the organization as a whole or areas of the organization more broadly rather than contributing directly to bringing a physical asset to the location and condition necessary for it to be capable of operating in the manner intended by management. The more the nature of a particular costs strays from being directly attributable to an item of PP&E, then the more likely it is that the cost will be determined to be in the nature of G&A.

3.6 Recoverable amount

The recoverable amount of an asset is the higher of its fair value less cost to sell and its value in use.

Fair value, less costs to sell, is the amount obtainable from the sale of an asset in an arm’s length transaction between knowledgeable, willing parties, less the costs of disposal. Value in use is the present value of the future cash flows expected to be derived from an asset.

3.7 Qualifying assets

A qualifying asset is an asset that necessarily takes a substantial period of time to get ready for its intended use or sale. A substantial period of time is defined as greater than one year.

4.0 CAPITALIZATION GUIDELINES

4.1 Materiality Limits

All expenditures for capital assets, including betterments, are subject to materiality limits.

While an expenditure might meet the definition to qualify as a capital asset, a materiality limit has been established to minimize the cost disadvantages where administration costs of capitalizing an asset may outweigh the intended benefits.

In view of the foregoing, expenditures that *are less than \$2,000* should be charged to an operating account (expensed). This limit applies to an individual asset, the total costs of a constructed asset, as well as betterments.

In cases where items are routinely purchased as a set, and have an aggregate purchase price of \$2,000 or more, the items will be capitalized and depreciated. For example: the purchase of a table and 4 chairs from the same vendor where the table and chairs are to be utilized as a set and the value of which is over \$2,000 in total.

Bulk purchases of similar items that have an *aggregate value of \$5,000* or more are to be recorded as a fixed asset regardless of individual price of item. For example: the purchase of 10 hand tools at \$500 each, where the total purchase is \$5,000 or more.

With respect to office furniture and computer hardware purchases, these materiality limits are reduced to \$500 and \$2,000. Specifically, expenditures that are less than \$500 should be expensed and bulk purchase of \$2,000 or more are to be capitalized. All acquisitions of used office furniture should be charged to expense.

4.2 Componentization of Assets

For each part of an item of PP&E with a cost that is significant in relation to the total cost of the item, the item shall be depreciated separately (IAS 16.43).

An entity allocates the amount initially recognized in respect of an item of property, plant and equipment to its significant parts and depreciates each such part (IAS 16.44).

A significant part of an item of PP&E may have a useful life and a depreciation method that are the same as the useful life and the depreciation method of another part of the same item. Such parts may be grouped in determining the depreciation charge (IAS 16.45).

4.3 Interest or Borrowing Costs

Borrowing costs that are directly attributable to the construction or acquisition of qualifying assets are capitalized as part of the cost of the asset. The OEB usually identifies borrowing costs that are capitalized as being Allowance for Funds Used in Construction (AFUDC). Only those assets with construction periods of *over 1 year* are to be considered for having their interest or borrowing costs capitalized.

For the purposes of determining whether an asset is a qualifying asset, those periods of time where there is a lack of construction activity, for whatever reason, should reflect a reduction of construction duration. Therefore, the period of time reflecting a lack of construction should be eliminated from the construction duration when determining whether the asset has a construction period of greater than one year.

Further requirements include that the qualifying asset has a reasonable expectation of completion and recovery. Interest or borrowing costs are to be charged to an operating account once substantially all of the activities necessary to prepare the qualifying asset for its intended use are complete (IAS 23.22).

The capitalization of borrowing costs should be suspended when there are extended periods where active development of a qualifying asset are suspended.

Borrowing costs are based on the Company's cost of borrowing. Borrowing costs that are directly attributable to the acquisition or construction of a qualifying asset are those borrowing costs that would have been avoided if the expenditure on the qualifying asset had not been made. When the company borrows funds specifically for the purpose of obtaining a particular qualifying asset, the borrowing costs that directly relate to that qualifying asset can be readily identified. Borrowing costs related to general borrowings, where general borrowings are used to obtain a qualifying asset, should be determined. A capitalization rate should be calculated as the weighted average of the borrowing costs applicable to the borrowings outstanding during the period (IAS 23.14). The

amount of borrowing costs that are capitalized during the period should not exceed the amount of borrowing costs incurred during that period. London Hydro calculates borrowing costs to be capitalized using the lower of the Ontario Energy Board's published Construction Work-In-Progress (CWIP) interest rates and actual borrowing costs incurred.

4.4 Replacement Parts

The cost of replacing part of an item of PP&E is recognized in the carrying amount of the item if it is probable that the future incremental economic benefits embodied within the part will flow to the Company and its costs can be measured reliably (IAS 16.7, 16.13). The carrying amount of the replaced part is derecognized (IAS 16.13).

4.5 Decommissioning or Dismantling (Constructive and Asset Retirement Obligations or ARO)

Where there is a legal or constructive obligation to remove and dispose of PP&E at the end of their useful life, a provision is recorded to cover such future removal and disposal costs. (IAS 37, Provisions, Contingent Liabilities and Contingent Assets) The obligation costs are recognized at best estimate to settle the present obligation (IAS 37.36).

It is felt that the Company's distribution network essentially operates in perpetuity, and accordingly the date upon which it will be taken out of service is generally not determinable. Therefore, the present value of that obligation should be immaterial if it exists at all.

Decommissioning or dismantling obligations may arise from contractual agreements (such as leases) or legislation governing the disposal requirements for an asset. When such obligations arise as a result of a past event and it is probable that an outflow of resources will be required to settle the obligation, a liability should be recorded. The initial estimate of such a liability is included in the cost of the asset (IAS 16.16 (c)).

4.6 Capital Spares

Spare parts and stand-by equipment are considered PP&E when the Company expects to use them during more than one period (year). If the spare parts and servicing equipment can be used only in connection with an item of PP&E, they are considered PP&E (IAS 16.8).

Therefore, spare transformers and meters and other such items of PP&E that are applicable to this guidance, are accounted for as an item of PP&E as they are i) not intended for resale, ii) have a longer period of future benefit as compared to inventory items, iii) form an integral part of the original distribution plant by enhancing reliability of the original distribution plant, and iv) provide future benefits because they are expected to be placed in service.

Spare parts commence to be amortized when the spare part is available for use (rather than put to use) (IAS 16.55).

4.7 Contributed Capital (Contributions in Aid of Construction)

Certain assets may be acquired or constructed with financial assistance in the form of contribution from customers or developers.

Capital contributions received are treated as a liability on the balance sheet (IFRIC 18).

Amortization of the deferred customer contributions is required and done so over the average life span of the related assets.

Additions to contributed capital throughout the year need to be amortized as incurred.

Amounts that are amortized are to be recorded as a charge to the revenue deferral account and a credit to revenue account. For the purposes of reporting to the OEB, contributed capital is considered to be recorded as a capital account (as a credit to the asset contra account).

The Company has yet to have a customer or developer with a new expansion project select an “alternative bid” option as determined under 3.2.3 of the OEB Distribution System Code. An alternative bid option is one in which the customer provides on their own the purchase or building of the expansion facilities. Upon acceptance of these facilities by the Company as meeting specific requirements, the facility ownership is then to be transferred from the customer to the Company. The transfer price for the expansion project is based on the Company’s initial offer that was made to the customer.

4.8 Major Inspections/Overhauls of Item of PP&E

If regular “major” inspections are instituted on an item or items of PP&E, regardless if the parts of the item are replaced, this cost is recognized in the carrying amount of the item of PP&E. (IAS 16.13). If the PP&E item is derecognized the remaining carrying amount of the cost of the previous major inspection is also derecognized.

The cost of the major inspection or overhaul included in the amount initially recognized for an item of PP&E should be allocated to the major inspection or overhaul component and amortized separately over the useful life of this component so that it is fully depreciated before the next major inspection occurs.

4.9 London Hydro Contributions to PP&E not Owned by London Hydro

Contributions to PP&E made by London Hydro, where ownership is not realized by London Hydro, should be classified as an Intangible Asset, based on the following requirements:

The contribution is a resource that is controlled by the entity as a result of asset purchase or self-creation and from which future economic benefits (inflows of cash or other assets) are expected. [IAS 38.8]

Thus, the three critical attributes of an intangible asset are:

- identifiability
- control (power to obtain benefits from the asset)
- future economic benefits (such as revenues or reduced future costs)

An example of such an intangible asset would be London Hydro contributions to a Hydro One Transformer Station. Although London Hydro provided expenditures to the PP&E item, London Hydro does not retain ownership of the item. However, London Hydro does obtain future economic benefit and has been provided by Hydro One assurance that London Hydro has the right to use the item of PP&E or that the item of PP&E’s future economic benefits will continue to accrue to London Hydro.

4.10 Computer Software Expenditures

Computer software expenditures are to be classified as an intangible asset if it is probable that the expected future economic benefits attributable to it will flow to the entity (IAS 38.21). Only major application software projects with total “acquisition and enhancement expenditures” in excess of the established materiality limit, per 4.1 Materiality Limit, and with an expected future life *exceeding two years*, are capitalized. All other software expenditures are charged to operations as incurred.

IAS 38, Intangible Assets, guidance for the recording and recognition of computer software expenditure:

- Purchased: capitalize
- Operating system for hardware: include in hardware cost **
- Internally developed (whether for use or sale): charge to expense until technological feasibility, probable future benefits, intent and ability to use or sell the software, resources to complete the software, and ability to measure cost
- Amortization: over useful life based on pattern of benefits (straight-line is the default)

Further criteria for computer software expenditures to be recorded as an item of an intangible asset is identified in item 3.2 Intangible Assets. Further interpretations can be found under “*Further Guidance, Intangible Assets*”, towards end of this Capital Asset Accounting Policy and Procedures document.

Software acquisition and enhancement expenditures include:

- Software purchase costs (including internal and external customization charges)
- Development costs for internally developed software. Permitted development costs must be identified with the following:
 - i. being technological feasibility,
 - ii. intending to complete the software,
 - iii. having the ability to use the intangible asset,
 - iv. having probable future benefits,
 - v. having available resources to complete the software, and
 - vi. having the ability to measure cost.

Examples of permitted development costs for internal development software projects can include testing, data purchase and loading costs, commissioning and documentation.

Software-related expenditures for existing data clean up or repair prior to loading are not capitalized as they represent a repair of existing data (exclusion to this is where data is required to be formatted before loading to a new computer system). Business process reengineering costs that are directly related to certain computer systems are charged to operation as incurred, as these costs are not an integral component for software. Training costs associated with any computer software projects are charged to operation as incurred (IAS 38.69).

Subsequent expenditure on computer software after its purchase or completion should be recognized as an expense when it is incurred, unless it is probable that this expenditure will enable the asset to generate future economic benefits in excess of its originally assessed standard of performance and the expenditure can be measured and attributed to the asset reliably. [Referenced to IAS 38.60]

** Software required for hardware to function (integral part of the related hardware) is considered hardware. For example, an operating system is to be charged to tangible fixed assets under computer hardware. Software that is not an integral part of computer hardware will be considered software and capitalized as an intangible asset. Both examples assume expenditures meet materiality limits and life span requirements.

5.0 POLICY COMPLIANCE

As with any policy, there are to be no exemptions to the requirements of this policy in the execution of day-to-day business. Staff must report incidents of non-compliance relating to this policy in a timely manner to their Manager or Supervisor. Non-compliance issues of a serious nature will be immediately reported to the CFO.

FURTHER GUIDANCE

Measurement Recognition

The Company shall measure an item of PP&E at initial recognition at its cost (IAS 16.15).

The cost of an item of PP&E comprises of:

- a) purchase price, including legal and brokerage fees, import duties and non-refundable purchase taxes, after deducting trade discounts and rebates.
- b) Any costs directly attributable to bring the asset to the location and condition necessary for it to be capable of operating in the manner intended by management. These can be costs of site preparation, initial delivery and handling, installation and assembly, and testing of functionality.
- c) The initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located, the obligation for which the Company incurs either when the item is acquired or as a consequence of having used the item during a particular period for purposes other than to produce inventories during that period. (IAS 16.16 a., b. and c.) (reference Item 4.5 for further information)

Examples of directly attributable costs are costs of employee benefits (as defined IAS 19 Employee Benefits), directly arising from the construction or acquisition of the item of PP&E; costs of site preparation; initial delivery and handling costs; installation and assembly costs; cost of testing whether the asset is functioning properly and professional fees.

As per IAS 16.19, the following costs are examples of costs not to be included as PP&E, and therefore shall be expensed. They are: Costs of opening a new facility, introduction of a new product or service, conducting business in a new location or with a new class of customer, administration and other general overhead costs. Other costs that should be recorded as expense include training, non-specific pre-construction project costs (where it is uncertain whether the costs will result in an addition to PP&E), and abnormal waste.

Useful Life Determinates

The Company shall consider all the following factors in determining the useful life of an asset (IAS 17.12):

- a) The expected usage of the asset. Usage is assessed by reference to the asset's expected capacity or physical output
- b) Expected physical wear and tear, which depends on operational factors such as loads to be used on asset, the repairs and maintenance program, and the care and maintenance of the asset while it is idle
- c) Technical or commercial obsolescence arising from changes or improvements in production, or change in the market demand or service input of the asset
- d) Legal or similar limits on the use of the asset

Intangible Assets

Classification of Intangible Assets Based on Useful Life

Intangible assets are classified as: [IAS 38.88]

- **Indefinite life:** no foreseeable limit to the period over which the asset is expected to generate net cash inflows for the entity
- **Finite life:** a limited period of benefit to the entity

Measurement Subsequent to Acquisition: Intangible Assets with Finite Lives

The cost less residual value of an intangible asset with a finite useful life should be amortized on a systematic basis over that life: [IAS 38.97]

- The amortization method should reflect the pattern in which the benefits are expected to be consumed.
- If the pattern cannot be determined reliably, amortize by the straight line method.
- The amortization charge is recognized in profit or loss unless another IFRS requires that it be included in the cost of another asset.
- The amortization period and method should be reviewed when required.
- The asset should also be assessed for impairment in accordance with IAS 36. [IAS 38.111]

Measurement Subsequent to Acquisition: Intangible Assets with Indefinite Lives

An intangible asset with an indefinite useful life should not be amortized. [IAS 38.107]

Its useful life should be reviewed each reporting period to determine whether events and circumstances continue to support an indefinite useful life assessment for that asset. If they do not, the change in the useful life assessment from indefinite to finite should be accounted for as a change in an accounting estimate. [IAS 38.109]

The asset should also be assessed for impairment in accordance with IAS 36 on an annual basis. [IAS 38.108]

Subsequent Expenditure

Subsequent expenditure on an intangible asset after its purchase or completion should be recognized as an expense when it is incurred, unless it is probable that this expenditure will enable the asset to generate future economic benefits in excess of its originally assessed standard of performance and the expenditure can be measured and attributed to the asset reliably. [IAS 38.60]

Land and Land Rights

Capitalized land includes direct purchase costs including appraisals, fees, commissions, surveys, title search and registration. Costs for first clearing and grading and installation of the plant are ultimately capitalized as part of the cost of PP&E constructed on the land, rather than as an integral cost of the land.

Capitalized land rights include costs of acquiring rights, interests and privileges in land owned by others. Land rights are considered under IFRS as an intangible asset and so guidance can be identified in intangible sections of this policy.

Appendix 2-5: Capitalization of Overhead

Appendix 2-D Overhead Expense

Applicants are to provide a breakdown of OM&A before capitalization in the below table. OM&A before capitalization may be broken down by cost center, program, drivers or another format best suited to focus on capitalized vs. uncapitalized OM&A.

OM&A Before Capitalization	2018 Historical Year	2019 Historical Year	2020 Historical Year	2021 Bridge Year	2022 Test Year
Asset management	\$ 5,677,944	\$ 5,325,832	\$ 5,530,420	\$ 6,056,300	\$ 6,283,000
Operations and maintenance	\$ 17,194,897	\$ 17,205,833	\$ 17,834,728	\$ 18,903,800	\$ 19,454,600
Metering and data management	\$ 3,653,969	\$ 3,773,530	\$ 3,887,226	\$ 4,174,800	\$ 4,339,100
Information technology	\$ 6,600,759	\$ 7,197,586	\$ 7,597,947	\$ 8,609,200	\$ 9,142,800
Customer service and collections	\$ 2,952,638	\$ 3,203,941	\$ 3,240,234	\$ 3,951,700	\$ 4,285,400
Corporate communications	\$ 1,027,752	\$ 1,255,035	\$ 1,114,541	\$ 1,404,900	\$ 1,505,000
Human resources, health and safety	\$ 1,647,066	\$ 1,803,655	\$ 1,858,744	\$ 1,890,500	\$ 2,031,200
Facilities and environmental services	\$ 3,290,437	\$ 3,394,554	\$ 3,503,427	\$ 3,644,500	\$ 3,736,900
Corporate services	\$ 5,280,046	\$ 5,311,884	\$ 5,731,238	\$ 5,619,040	\$ 5,709,700
Locate services	\$ 1,061,779	\$ 1,038,641	\$ 1,117,756	\$ 1,096,400	\$ 1,125,700
Fleet services (gross expenditures)	\$ 4,405,792	\$ 4,510,635	\$ 4,801,883	\$ 5,169,400	\$ 5,299,900
Materials management (gross expenditures)	\$ 976,942	\$ 1,043,825	\$ 1,164,601	\$ 1,381,000	\$ 1,414,200
Fleet and materials management cost allocations	-\$ 3,337,925	-\$ 3,349,519	-\$ 3,531,596	-\$ 3,859,500	-\$ 3,966,400
Total OM&A Before Capitalization (B)	\$ 50,432,097	\$ 51,715,433	\$ 53,851,149	\$ 58,042,040	\$ 60,361,100

Applicants are to provide a breakdown of capitalized OM&A in the below table. Capitalized OM&A may be broken down using the categories listed in the table below if possible. Otherwise, applicants are to provide its own break down of capitalized OM&A.

Capitalized OM&A	2018 Historical Year	2019 Historical Year	2020 Historical Year	2021 Bridge Year	2022 Test Year	Directly Attributable? (Yes/No)	Explanation for Change in Overhead Capitalized
Asset management	\$ 1,539,981	\$ 1,597,616	\$ 1,898,519	\$ 2,007,100	\$ 2,073,300	Yes	No changes.
Operations and maintenance	\$ 6,152,536	\$ 6,164,107	\$ 6,249,519	\$ 7,531,800	\$ 7,688,700	Yes	No changes.
Metering and data management	\$ 296,863	\$ 132,108	\$ 286,166	\$ 293,800	\$ 302,200	Yes	No changes.
Information Technology	\$ 1,281,371	\$ 1,601,227	\$ 2,372,818	\$ 2,764,800	\$ 2,833,900	Yes	No changes.
Customer service and collections	\$ 139,948	\$ 88,965	\$ 159,909	\$ 336,000	\$ 336,000	Yes	No changes.
Corporate communications	\$ -	\$ 3,852	\$ 6,252	\$ 112,100	\$ 114,600	Yes	No changes.
Human resources, health and safety	\$ -	\$ -	\$ 1,843	\$ -	\$ -	Yes	No changes.
Facilities and environmental services	\$ 587	\$ 1,681	\$ 12,019	\$ -	\$ -	Yes	No changes.
Fleet services (gross expenditures)	\$ 1,422,742	\$ 1,495,134	\$ 1,651,462	\$ 1,789,000	\$ 1,823,500	Yes	No changes.
Materials management (gross expenditures)	\$ 298,444	\$ 259,702	\$ 285,390	\$ 402,100	\$ 410,900	Yes	No changes.
Total Capitalized OM&A (A)	\$ 11,132,473	\$ 11,344,393	\$ 12,923,898	\$ 15,236,700	\$ 15,583,100		
% of Capitalized OM&A (=A/B)	22%	22%	24%	26%	26%		

Appendix 2-6: Service Quality and Reliability Performance

**Appendix 2-G
Service Reliability and Quality Indicators**

Service Reliability

Index	Excluding Loss of Supply and Major Event Days					Including Major Event Days, Excluding Loss of Supply					Including Loss of Supply, Excluding Major Event Days					Including Loss of Supply and Major Event Days				
	2016	2017	2018	2019	2020	2016	2017	2018	2019	2020	2016	2017	2018	2019	2020	2016	2017	2018	2019	2020
SAIDI	0.97	0.93	0.82	0.80	0.86	0.97	1.31	1.36	1.14	0.86	0.99	0.94	0.90	0.89	0.95	0.99	1.42	1.44	1.37	0.95
SAIFI	1.03	1.00	1.40	1.14	1.05	1.03	1.28	1.80	1.33	1.05	1.24	1.15	1.79	1.71	1.48	1.24	1.51	2.20	2.09	1.48

5 Year Historical Average

SAIDI		0.874		1.127		0.933		1.232
SAIFI		1.123		1.297		1.476		1.706

SAIDI = System Average Interruption Duration Index
SAIFI = System Average Interruption Frequency Index

Service Quality

Indicator	OEB Minimum Standard	2016	2017	2018	2019	2020
Low Voltage Connections	90.0%	96.60%	97.56%	99.48%	99.32%	98.86%
High Voltage Connections	90.0%	100.00%	100.00%	100.00%	100.00%	100.00%
Telephone Accessibility	65.0%	67.00%	68.57%	70.33%	76.79%	73.41%
Appointments Met	90.0%	99.90%	99.87%	100.00%	100.00%	100.00%
Written Response to Enquires	80.0%	100.00%	100.00%	100.00%	100.00%	100.00%
Emergency Urban Response	80.0%	97.30%	96.46%	97.04%	98.29%	93.15%
Emergency Rural Response	80.0%	N/A	N/A	N/A	N/A	N/A
Telephone Call Abandon Rate	10.0%	3.10%	2.95%	3.02%	2.85%	3.82%
Appointment Scheduling	90.0%	98.79%	95.21%	82.75%	100.00%	100.00%
Rescheduling a Missed Appointment	100.0%	100.00%	100.00%	N/A	N/A	N/A
Reconnection Performance Standard	85.0%	99.20%	99.92%	99.95%	99.74%	100.00%