

1 Q. **Exhibit 11 – Depreciation Study**

2 It is recommended that the average service lives of a number of asset groups be
3 changed. Provide a table showing the current average service life, the proposed
4 change and the impact on depreciation expense of each proposed change.

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7 A. This response was provided by Concentric Advisors.

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9 Please refer to PUB-NLH-100, Attachment 1 which provides the annual accrual
10 amounts calculated using the currently approved average service life and lowa
11 curves and the currently proposed recommendations for average service life and
12 lowa curves. The changes relate only to the changes in the average service life and
13 lowa curve recommendations and does not include the impact associated with
14 recommended inclusion of net salvage and phased in use of the ELG procedure. For
15 a summary of the impact of all the changes please refer to the response to IC-NLH-
16 035.

NEWFOUNDLAND AND LABRADOR HYDRO
 TABLE 1A. ESTIMATED SURVIVOR CURVES, ORIGINAL AND DEEMED COST AND ANNUAL ACCRUALS
 RELATED TO PLANT IN SERVICE AS OF DECEMBER 31, 2015
 RESPONSE TO PUB-NLH-100

ACCOUNT	ACCOUNT DESCRIPTION	CURRENT PARAMETERS				RECOMMENDED LIFE PARAMETER			VARIANCE	
		SURVIVOR CURVE	NET SALVAGE PERCENTAGE	ORIGINAL COST DECEMBER 31, 2015	ACCRUAL AMOUNT	ORIGINAL COST ACCRUAL RATE	SURVIVOR CURVE	ACCRUAL AMOUNT		ACCRUAL RATE
A01.	AIRCRAFT LANDING STRIP	22-S6	0	475,498	2,196	0.46	33-R2	1,124	0.24	(1,072)
B01.	BATTERY AND POWER SYSTEMS	15-S3	0	11,399,996	716,410	6.28	26-L1.5	267,402	2.35	(449,008)
B02.	BOILER SYSTEM	35-R3	0	23,876,046	60,690	0.25	40-R3	51,390	0.22	(9,300)
B03.	BOOMS - TIMBER	40-R1	0	175,556	3,606	2.05	25-R2	11,331	6.45	7,725
B04.	BRIDGES	60-R4	0	4,254,290	22,142	0.52	65-R4	19,633	0.46	(2,509)
B07.	BUS DUCT GENERATOR	35-R3	0	1,456,108	35,141	2.41	40-R4	29,315	2.01	(5,826)
B08.	BUSWORK AND HARDWARE	40-R3	0	7,307,906	124,821	1.71	50-R4	86,913	1.19	(37,908)
C01.	CABLES - TELECONTROL	40-R2.5	0	2,643,339	9,712	0.37	30-R4	13,448	0.51	3,736
C04.	CABLES - ABOVE GROUND	50-R3	0	10,550,929	131,875	1.25	60-R4	100,613	0.95	(31,262)
C06.	CAPACITORS	35-R4	0	994,744	101,634	10.22	35-R3	64,049	6.44	(37,585)
C09.	CIRCUIT BREAKERS	55-R3	0	39,656,672	687,332	1.73	60-R2.5	598,316	1.51	(89,016)
C10.	COMPRESSED AIR SYSTEMS	40-R3	0	16,666,710	374,226	2.25	41-R1.5	354,813	2.13	(19,413)
C14.	CONDUCTOR - DISTRIBUTION	55-R3	0	34,320,050	408,597	1.19	45-R3	543,107	1.58	134,510
C15.	CONTROL, METERING, RELAYING	30-R1	0	29,645,208	748,144	2.52	40-R3	568,608	1.92	(179,536)
C17.	COUNTERPOISE	50-R3	0	3,623,089	80,085	2.21	55-R2.5	63,340	1.75	(16,745)
D01.	DAMS, DYKES, CANALS AND TUNNELS	100-R4	0	361,909,256	4,998,750	1.38	110-R4	4,330,896	1.2	(667,854)
D02.	DIESEL SYSTEMS AND ENGINES	25-S0.5	0	41,897,351	1,162,225	2.77	25-L0.5	1,100,941	2.63	(61,284)
D03.	DISCONNECT SWITCHES	45-S2.5	0	20,883,528	423,290	2.03	55-R2.5	306,802	1.47	(116,488)
D04.	DYKES AND LINERS	42-L1	0	2,477,333	20,428	0.82	42-L1.5	21,022	0.85	594
E01.	ELEVATORS	40-S5	0	89,800	0	0.00	45-S5	0	0	0
E02.	EMS EQUIPMENT	25-R2.5	0	12,917,219	10,627	0.08	35-R2.5	6,392	0.05	(4,235)
E03.	ENVIRONMENTAL EQUIPMENT	30-S4	0	935,876	87,763	9.38	45-R2.5	11,249	1.2	(76,514)
F01.	FALL ARREST EQUIPMENT	10-L2	0	2,509,020	207,915	8.29	15-R4	122,244	4.87	(85,671)
F02.	FENCING	47-R3	0	7,555,589	102,637	1.36	52-R3	90,277	1.19	(12,360)
F03.	FIRE FIGHTING EQUIPMENT	45-R4	0	13,906,919	217,125	1.56	50-R4	190,820	1.37	(26,305)
F04.	FOOTINGS AND FOUNDATIONS	50-R4	0	20,413,239	440,436	2.16	65-R3	255,345	1.25	(185,091)
F05.	FREQUENCY CONVERSION	40-S4	0	2,453,577	24,248	0.99	45-S4	19,595	0.8	(4,653)
G01.	GAS TURBINE SYSTEMS	35-R4	0	69,325,761	1,386,411	2.00	45-R3	1,033,370	1.49	(353,041)
G03.	GENERATORS	60-S4	0	105,132,875	1,838,662	1.75	65-S3	1,576,563	1.5	(262,099)
G04.	GENERATOR - WINDINGS	40-S3	0	24,614,758	409,317	1.66	50-S3	321,672	1.31	(87,645)
I02.	INSTRUMENTATION	26-L0.5	0	5,967,398	45,265	0.76	30-L0.5	38,194	0.64	(7,071)
I03.	INSULATORS	30-L3	0	41,988,322	1,297,109	3.09	35-L3	1,002,593	2.39	(294,516)
I04.	INTAKE STRUCTURES	100-R4	0	19,436,445	267,855	1.38	110-R4	231,764	1.19	(36,091)
I05.	INVERTERS	25-S3	0	521,505	19,869	3.81	25-S1.5	12,036	2.31	(7,833)
L03.	LAND IMPROVEMENTS	50-R3	0	14,196,794	182,638	1.29	75-R3	95,457	0.67	(87,181)
L04.	LIGHTING SYSTEMS	45-R4	0	926,303	10,352	1.12	50-R4	8,923	0.96	(1,429)
L06.	LINE COUPLING EQUIPMENT	23-R5	0	11,226	0	0.00	24-R5	0	0	0
M03.	METALCLAD SWITCHGEAR CUB/EQU 4kv/600	30-R4	0	2,233,645	27,063	1.21	45-R4	14,247	0.64	(12,816)
M04.	METER TEST SWITCHES	35-R4	0	58,301	850	1.46	35-R5	928	1.59	78
M07.	METERS - ANALOGUE	25-L3	0	698,384	5,489	0.79	25-L2	4,235	0.61	(1,254)
M08.	METERS - OTHER	22-L3	0	262,853	9,369	3.56	22-L4	10,414	3.96	1,045
M10.	MISCELLANEOUS UNITS OF PROPERTY	20-R1	0	25,815,956	962,833	3.73	22-R1.5	877,924	3.4	(84,909)
M11.	MOBILE - A.T.V.'S AND SNOWMOBILES	7-SQ	0	1,906,739	191,203	10.03	6-L3	249,876	13.1	58,673
M12.	MOBILE - AIR COMPRESSOR ATTACHMENT AND BOAT	20-R2	0	432,046	7,311	1.69	20-L0	6,642	1.54	(669)
M13.	MOBILE - ARGO'S	7-SQ	0	287,287	3,826	1.33	9-R5	2,649	0.92	(1,177)
M14.	MOBILE - FLEX/FORK/LOAD/GRADE/MUSK/TRAILER	20-R2	0	10,581,312	399,343	3.77	18-L3	497,263	4.7	97,920
M16.	MULTIPLEX EQUIPMENT	18-R2.5	0	2,812,217	50,984	1.81	18-S1.5	52,487	1.87	1,503
P04.	POLE CRIBS AND POLE HARDWARE	50-L2	0	118,371,156	1,866,819	1.58	35-S2.5	3,063,406	2.59	1,196,587
P05.	POLE STRUCTURES - WOOD	53-R4	0	129,790,285	2,552,652	1.97	57-R3	2,162,600	1.67	(390,052)
P07.	POLES - WOOD	37-R3	0	72,604,630	1,543,300	2.13	43-R1	1,198,843	1.65	(344,457)

NEWFOUNDLAND AND LABRADOR HYDRO
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 RELATED TO PLANT IN SERVICE AS OF DECEMBER 31, 2015
 RESPONSE TO PUB-NLH-100

ACCOUNT	ACCOUNT DESCRIPTION	CURRENT PARAMETERS				RECOMMENDED LIFE PARAMETER			VARIANCE	
		SURVIVOR CURVE	NET SALVAGE PERCENTAGE	ORIGINAL COST DECEMBER 31, 2015	ACCRUAL AMOUNT	ORIGINAL COST ACCRUAL RATE	SURVIVOR CURVE	ACCRUAL AMOUNT		ACCRUAL RATE
P08.	POWER LINE CARRIER	20-R4	0	4,971,572	63,449	1.28	25-R3	40,639	0.82	(22,810)
P09.	POWER SYSTEMS	18-R3	0	664,592	39,366	5.92	20-L3	31,737	4.78	(7,629)
P11.	PRINTERS	5-SQ	0	1,038,001	66,290	6.39	6-SQ	50,319	4.85	(15,971)
P12.	PROTECTIVE CONTROL AND RELAY PANELS	30-R3	0	9,507,129	254,317	2.68	35-R3	210,252	2.21	(44,065)
R01.	RADIO TOWERS (WOOD OR STEEL)	35-R3	0	9,759,106	109,344	1.12	48-R3	71,439	0.73	(37,905)
R02.	RADIOS - FIXED MICROWAVE EQUIPMENT	22-R4	0	6,212,764	113,464	1.83	19-R5	159,307	2.56	45,843
R03.	RADIOS - FIXED UHF EQUIPMENT	15-L1.5	0	101,662	6,596	6.49	15-L0.5	5,907	5.81	(689)
R05.	RADIOS - MOBILE VHF BASE STATION	15-R3	0	7,278,664	304,796	4.19	15-R4	326,656	4.49	21,860
R08.	RECLOSERS	40-R4	0	7,158,607	134,205	1.87	48-R3	103,688	1.45	(30,517)
R09.	REGULATORS	35-R3	0	5,667,640	150,687	2.66	40-S0.5	106,726	1.88	(43,961)
R12.	RIGHT-OF-WAYS	55-R4	0	21,729,649	414,493	1.91	65-R4	296,373	1.36	(118,120)
R13.	ROADS	50-R4	0	84,440,747	3,264,445	3.87	60-R4	2,224,719	2.63	(1,039,726)
R15.	RUNNER	33-R5	0	11,669,844	1,185,654	10.16	55-R5	424,434	3.64	(761,220)
S01.	SCADA EQUIPMENT	20-R3	0	4,929,933	146,742	2.98	20-L3	149,129	3.02	2,387
S02.	SECTIONALIZERS	25-R3	0	154,009	5,189	3.37	25-R5	6,911	4.49	1,722
S03.	SERVERS	5-SQ	0	3,019,204	73,702	2.44	7-SQ	47,011	1.56	(26,691)
S04.	SEWAGE DISPOSAL SYSTEM	45-R2.5	0	2,919,319	31,129	1.07	55-R4	24,407	0.84	(6,722)
S06.	SPILLWAY STRUCTURES	100-R4	0	28,120,270	382,177	1.36	110-R4	331,214	1.18	(50,963)
S07.	STACKS	40-R4	0	7,850,850	126,284	1.61	55-R4	89,340	1.14	(36,944)
S09.	STATIC EXCITATION - TRANSFORMERS	32-R4	0	734,327	1,275	0.17	45-R4	429	0.06	(846)
S10.	STATION SERVICE	40-R4	0	5,233,336	216,569	4.14	50-R4	118,552	2.27	(98,017)
S13.	STORM AND YARD DRAINAGE	45-R4	0	1,308,713	9,159	0.70	55-R4	6,537	0.5	(2,622)
S15.	STRUCTURAL SUPPORTS (WOOD OR STEEL)	45-R4	0	11,677,609	214,491	1.84	55-R4	147,060	1.26	(67,431)
T01.	TELECONTROL SYSTEM	27-L1	0	12,429,279	259,020	2.08	25-L1.5	292,605	2.35	33,585
T04.	TOWERS	65-R3	0	77,739,424	1,207,323	1.55	65-R4	1,256,447	1.62	49,124
T06.	TRANSFORMERS - PAD MOUNT	40-R3	0	17,723,652	422,857	2.39	40-R1.5	414,873	2.34	(7,984)
T07.	TRANSFORMERS - POLE MOUNTED	30-R2	0	37,040,457	1,145,880	3.09	30-L1	1,097,039	2.96	(48,841)
T09.	TURBINES	50-R3	0	65,159,636	1,550,516	2.38	55-R2.5	1,207,313	1.85	(343,203)
T10.	HOLYROOD GAS TURBINE - COMBUSTOR OVERHAUL	50-R3	0	2,206,062	43,741	1.98	3-SQ	866,247	39.27	822,506
T11.	HOLYROOD GAS TURBINE - TURBINE OVERHAUL	50-R3	0	2,206,062	43,741	1.98	6-SQ	393,749	17.85	350,008
T12.	HOLYROOD GAS TURBINE - COMBUSTOR OVERHAUL	50-R3	0	3,088,487	61,237	1.98	12-SQ	263,640	8.54	202,403
V05.	VEHICLES - BOOMS/BODIES/CRANES/CAB/CHASSIS	15-L1.5	0	14,954,546	776,328	5.19	12-L3	1,147,544	7.67	371,216
V07.	VEHICLES - DUMP TRUCKS	20-L3	0	11,535	0	0.00	10-L5	0	0	0
W01.	WATER REGULATING STRUCTURES	55-S4	0	22,451,738	574,847	2.56	65-S4	415,932	1.85	(158,915)
W03.	WATER SYSTEMS - FEED	45-L2	0	6,531,260	71,151	1.09	55-R2.5	57,526	0.88	(13,625)
W04.	WATER TREATMENT	34-L4	0	11,921,573	197,807	1.66	55-R2.5	108,057	0.91	(89,750)
Sub-Total				1,832,582,302	37,948,846	2.07		34,184,829	1.98	(3,764,017)

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 RESPONSE TO PUB-NLH-100

ACCOUNT	ACCOUNT DESCRIPTION	CURRENT PARAMETERS					RECOMMENDED LIFE PARAMETER			VARIANCE	
		SURVIVOR CURVE	NET SALVAGE PERCENTAGE	ORIGINAL COST DECEMBER 31, 2015	ACCRUAL AMOUNT	ORIGINAL COST ACCRUAL RATE	SURVIVOR CURVE	ACCRUAL AMOUNT	ACCRUAL RATE		
HOLYROOD ASSETS		3/31/2021									
B01.1	BATTERY AND POWER SYSTEMS	15-S3	0	106,627	11,760	11.03	26-L1.5	13,957	13.09	2,197	
B02.1	BOILER SYSTEM	35-R3	0	35,073,430	1,585,468	4.52	40-R3	1,538,571	4.39	(46,897)	
C01.1	CABLES - TELECONTROL	40-R2.5	0	89,750	5,141	5.73	30-R4	5,121	5.71	(20)	
C04.1	CABLES - ABOVE GROUND	50-R3	0	629,827	13,821	2.19	60-R4	13,419	2.13	(402)	
C15.1	CONTROL, METERING, RELAYING	30-R1	0	119,880	14,008	11.69	40-R3	13,634	11.37	(374)	
E03.1	ENVIRONMENTAL EQUIPMENT	30-S4	0	1,280,261	75,819	5.92	45-R2.5	76,415	5.97	596	
F03.1	FIRE FIGHTING EQUIPMENT	45-R4	0	797,150	50,945	6.39	50-R4	49,563	6.22	(1,382)	
F04.1	FOOTINGS AND FOUNDATIONS	50-R4	0	56,613	1,881	3.32	65-R3	1,866	3.3	(15)	
G01.1	GAS TURBINE SYSTEMS	35-R4	0	24,645	158	0.64	45-R3	146	0.59	(12)	
G03.1	GENERATORS	60-S4	0	1,067,438	133,346	12.49	65-S3	133,346	12.49	0	
I02.1	INSTRUMENTATION	26-L0.5	0	6,727,326	389,608	5.79	30-L0.5	379,394	5.64	(10,214)	
I05.1	INVERTERS	25-S3	0	24,417	1,370	5.61	25-S1.5	1,391	5.7	21	
L03.1	LAND IMPROVEMENTS	50-R3	0	5,766	156	2.71	75-R3	153	2.65	(3)	
M10.1	MISCELLANEOUS UNITS OF PROPERTY	20-R1	0	1,611,947	239,652	14.87	22-R1.5	236,325	14.66	(3,327)	
P12.1	PROTECTIVE CONTROL AND RELAY PANELS	30-R3	0	106,685	7,929	7.43	35-R3	7,899	7.4	(30)	
R13.1	ROADS	50-R4	0	1,859	45	2.42	60-R4	43	2.31	(2)	
S07.1	STACKS	40-R4	0	9,202,119	636,901	6.92	55-R4	582,779	6.33	(54,122)	
T09.1	TURBINES	50-R3	0	27,077,372	2,698,012	9.96	55-R2.5	2,700,859	9.97	2,847	
W03.1	WATER SYSTEMS - FEED	45-L2	0	2,818,634	207,572	7.36	55-R2.5	202,521	7.19	(5,051)	
W04.1	WATER TREATMENT	34-L4	0	2,792,962	226,907	8.12	55-R2.5	219,631	7.86	(7,276)	
Sub-Total				89,614,707	6,300,499	7.03		6,177,033	6.72	(123,466)	
TOTAL				1,922,197,008	44,249,345	2.30		40,361,862	2.20	(3,887,483)	
INCREMENTAL ACCRUAL AMOUNT CHANGE											(3,887,483)
CHANGE FROM CURRENT ACCRUAL AMOUNT											(3,887,483)