

1 Q. Depreciation Study Results

2 Exhibit I Schedule I, pg. 111-4&5 provides details of the book depreciation reserve as at  
3 December 31, 2009. The total book depreciation reserve amount is \$529,577,511. To  
4 assess the adequacy of Newfoundland and Labrador Hydro's ("Hydro") book  
5 accumulated depreciation reserve amount, Gannett Fleming Inc., as part of the  
6 depreciation study submitted with the Application (the "Depreciation Study"), calculated  
7 the accrued depreciation amount for each asset category as at December 31, 2009.  
8 Please provide the total of the calculated accrued depreciation amounts from the  
9 information provided in Exhibit I, Part V, column 3 and provide the difference between  
10 that total and the total book accumulated depreciation reserve amount of  
11 \$529,577,511. Please confirm that this difference corresponds to the Accumulated  
12 Depreciation Variance referred to in Hydro's depreciation study submitted to the Board  
13 on December 22, 2005, which showed a total Accumulated Depreciation Variance of  
14 \$174,236,975.79.

15

16 A. The total of the calculated accrued depreciation amounts from the information provided  
17 in Exhibit 1, Part V, column 3 is reproduced in column 6 of the attached schedule.  
18 Column 7 of the attached schedule shows a total Accumulated Depreciation Variance of  
19 \$107,497,627.00. This difference corresponds to the Accumulated Depreciation Variance  
20 referred to in Hydro's depreciation study submitted to the Board on December 22, 2005,  
21 which showed a total Accumulated Depreciation Variance of \$174,236,975.79. The  
22 change in the amount of the variance between 2005 and 2009 relates to a change in the  
23 depreciation methodology from Equal Life Group in 2005 to Average Service Life in  
24 2009, as well as a change in the service lives of some assets and depreciation expense  
25 recorded between 2005 and 2009.

**Newfoundland and Labrador Hydro**  
**Schedule 1: Estimated Survivor Curves, Original Cost and Annual Accruals**  
**Related to Estimated Original Cost at December 31, 2009**  
**Excludes Holyrood Assets not required for Synchronous Condenser Operations**  
**Average Service Life Used**

DEPRECIABLE WORK		SURVIVOR	ORIGINAL COST	BOOK	CALCULATED	ACCUMULATED
		CURVE	AT	DEPRECIATION	ACCRUED	DEPRECIATION
(1)	(2)	(4)	DECEMBER 31, 2009	RESERVE	FROM PART V	VARIANCE
		(2)	(4)	(5)	(6)	(7) = (6) - (5)
A01	AIRCRAFT LANDING STRIP	22-S6	394,805.08	217,451	289,242	71,791
A04	AUXILIARY POWER SYSTEMS	30-R4	3,283,352.56	1,647,378	1,841,261	193,883
B01	BATTERY & POWER SYSTEMS	15-S3	8,289,725.71	3,637,112	3,734,965	97,853
B02	BOILER SYSTEM	35-R3	1,946,158.89	395,063	170,742	(224,321)
B03	BOOMS - TIMBERS	40-R1	263,995.47	236,552	122,841	(113,711)
B04	BRIDGES	60-R4	4,257,163.40	3,049,973	1,434,116	(1,615,857)
B05	BUILDINGS - OTHER	50-R0.5	48,812,722.58	23,386,172	9,502,290	(13,883,882)
B06	BUILDINGS - METAL	55-R3	19,943,772.82	14,357,796	7,629,402	(6,728,394)
B07	BUS DUCT GENERATOR	35-R3	825,804.04	425,560	377,997	(47,563)
B08	BUSWORK & HARDWARE	40-R3	5,539,614.59	2,748,318	2,819,327	71,009
C01	CABLES - TELECONTROL	40-R2.5	1,605,996.01	1,172,691	301,494	(871,197)
C02	CABLE - SUBMARINE	45-R4	8,901,116.47	5,618,356	3,612,025	(2,006,331)
C03	CABLES - UNDER GROUND	60-S4	1,852,851.63	1,202,958	837,765	(365,193)
C04	CABLES - ABOVE GROUND	50-R3	9,336,561.23	5,199,675	4,226,148	(973,527)
C06	CAPICTORS	35-R4	1,004,935.12	140,385	444,685	304,300
C08	CHLORINATION SYSTEMS	40-R4				
C09	CIRCUIT BREAKERS	55-R3	16,714,614.21	6,625,080	6,301,114	(323,966)
C10	COMPRESSED AIR SYSTEMS	40-R3	4,662,228.89	2,395,576	1,650,315	(745,261)
C11	COMPUTERS	5-SQ	5,619,782.72	4,065,444	4,088,282	22,838
C13	CONDUCTOR	60-R3	62,857,533.60	16,902,895	23,728,853	6,825,958
C14	CONDUCTOR - DISTRIBUTION	55-R3	21,401,471.20	9,384,068	5,297,434	(4,086,634)
C15	CONTROL, METER / RELAYING	30-R1	18,718,502.07	8,317,645	7,192,654	(1,124,991)
C16	COOLING SYSTEMS	40-R1.5	3,794,719.13	2,097,408	903,593	(1,193,815)

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**Average Service Life Used**

	DEPRECIABLE WORK	SURVIVOR CURVE	ORIGINAL COST AT DECEMBER 31, 2009	BOOK DEPRECIATION RESERVE	CALCULATED ACCRUED FROM PART V	ACCUMULATED DEPRECIATION VARIANCE
	(1)	(2)	(4)	(5)	(6)	(7) = (6) - (5)
C17	COUNTERPOISE	50-R3	3,558,954.86	991,815	1,296,052	304,237
C18	CRANES	70-R3	6,369,327.68	462,789	1,889,113	1,426,324
D01	DAMS & DYKES	100-R4	351,201,750.94	1,781,039	91,894,437	90,113,398
D02	DIESEL SYSTEMS & ENGINES	25-S0.5	21,346,252.47	11,394,298	6,982,879	(4,411,419)
D03	DISCONNECT SWITCHES	45-S2.5	9,114,371.51	4,056,214	3,933,013	(123,201)
D04	DYKES AND LINERS	42-L1	1,887,138.00	1,592,485	585,038	(1,007,447)
E01	ELEVATORS	40-S5	89,800.00	89,800	79,922	(9,878)
E02	EMS EQUIPMENT	25-R2.5	13,446,886.26	13,184,644	7,811,304	(5,373,340)
E03	ENVIRONMENTAL EQUIPMENT	30-S4	10,395.75	2,630	1,100	(1,530)
F01	FALL ARREST EQUIPMENT	10-L2	1,318,153.90	103,513	252,425	148,912
F02	FENCING	47-R3	4,825,159.64	2,883,646	1,605,275	(1,278,371)
F03	FIRE FIGHTING EQUIPMENT	45-R4	9,222,528.23	4,799,183	2,993,956	(1,805,227)
F04	FOOTINGS & FOUNDATIONS	50-R4	16,144,467.22	6,483,604	7,168,265	684,661
F05	FREQ CONVERSION	40-S4	869,211.95	36,565	22,440	(14,125)
F06	FUEL SYSTEMS	50-R1.5	14,784,748.08	7,307,166	2,315,681	(4,991,485)
G01	GAS TURBINE SYSTEMS	35-R4	30,993,022.69	25,552,246	18,691,073	(6,861,173)
G02	GATES	80-R4	15,312,218.70	1,743,278	5,271,934	3,528,656
G03	GENERATORS	60-S4	64,312,110.88	24,318,003	25,436,315	1,118,312
G04	GENERATOR - WINDINGS	40-S3	6,766,230.94	6,392,535	4,357,483	(2,035,052)
G05	GLYCOL SYSTEMS	40-S3	620,703.54	495,234	319,507	(175,727)
G06	GOVENORS	45-S4	7,685,239.39	394,699	2,735,895	2,341,196

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**Average Service Life Used**

DEPRECIABLE WORK		SURVIVOR	ORIGINAL COST	BOOK	CALCULATED	ACCUMULATED
		CURVE	AT	DEPRECIATION	ACCRUED	DEPRECIATION
			DECEMBER 31, 2009	RESERVE	FROM PART V	VARIANCE
(1)		(2)	(4)	(5)	(6)	(7) = (6) - (5)
G07	GROUND WIRE SYSTEM	55-R4	7,302,893.45	2,167,951	2,366,916	198,965
H01	HRDWIRED SUPRVSRY EQUIP	17-L3				
I01	INFORMATION DELIVERY SYS - ECC	20-S4				
I02	INSTRUMENTATION	26-I0.5	4,018,333.05	1,212,524	585,645	(626,879)
I03	INSULATORS	30-L3	36,376,195.89	10,491,724	12,919,019	2,427,295
I04	INTAKE STRUCTURES	100-R4	18,844,444.76	100,300	4,669,270	4,568,970
I05	INVERTERS	25-S3	466,597.96	312,787	185,501	(127,286)
L03	LAND IMPROVMENTS	50-R3	12,638,775.53	7,147,132	5,564,742	(1,582,390)
L04	LIGHTING SYSTEMS	45-R4	550,249.54	390,331	355,328	(35,003)
L05	LIGHTNING ARRESTORS	58-R3	5,619,879.81	1,764,959	951,650	(813,309)
L06	LINE COUPLING EQUIPMENT	23-R5	12,725.56	12,726	12,047	(679)
M01	MAIN BREAKERS	42-R0.5	551,508.09	210,996	79,111	(131,885)
M03	METALCLAD SWITCHGEAR CUB/EQU 4kv/600	30-R4	1,849,870.49	1,442,814	1,399,435	(43,379)
M04	METER TEST SWITCHES	35-R5	48,910.55	31,786	26,483	(5,303)
M05	METERING TANKS	37-R3	208,167.19	108,522	110,757	2,235
M06	METERS - DIGITAL	20-L3	3,430,944.36	745,450	936,837	191,387
M07	METERS - ANALOGUE	25-L3	488,014.47	370,459	330,626	(39,833)
M08	METERS - OTHER	22-L3	194,391.51	72,936	87,717	14,781
M10	MISC. UNITS OF PROP	20-R1	2,035,856.23	1,205,671	1,299,263	93,592
M11	MOBILE - A.T.V.'S & SNOWMOBILES	7-SQ	1,369,874.43	550,216	450,205	(100,011)
M12	MOBILE - AIR COMPRESSOR, ATTACHMENT & BOAT	20-R2	410,663.64	325,669	225,665	(100,004)

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		CURVE	AT	DEPRECIATION	ACCRUED	DEPRECIATION
			DECEMBER 31, 2009	RESERVE	FROM PART V	VARIANCE
(1)		(2)	(4)	(5)	(6)	(7) = (6) - (5)
M13	MOBILE - ARGO'S	7-SQ	30,211.03	28,589	24,419	(4,170)
M14	MOBILE - FLEX/FORK/LOAD/GRADE/MUSK/TRAILER	20-R2	8,248,424.67	5,220,195	2,850,052	(2,370,143)
M16	MULTIPLEX EQUIPMENT	18-R2.5	2,889,207.03	2,096,283	1,088,147	(1,008,136)
O01	OFFICE EQUIPMENT	20-SQ	1,195,347.67	877,289	466,775	(410,514)
O02	OFFICE FURNITURE	20-SQ	4,269,330.12	3,839,669	3,456,220	(383,449)
P01	P.C.B. STORAGE CONTAINER	30-R4	42,479.84	38,586	25,076	(13,510)
P02	PABX - PRIV AUTO BRANCH EXCH	20-R4	819,535.49	427,128	223,163	(203,965)
P03	PENSTOCK	70-R4	56,215,065.27	8,625,533	21,045,301	12,419,768
P04	POLE CRIBS & POLE HARDWARE	50-L2	65,911,264.63	22,355,247	12,294,159	(10,061,088)
P05	POLE STRUCTURES - WOOD	53-R4	104,505,267.12	25,429,257	36,738,040	11,308,783
P06	POLES - CONCRETE	25-R4	215,304.78	160,922	163,288	2,366
P07	POLES - WOOD	37-R3	40,210,866.37	16,899,802	10,959,009	(5,940,793)
P08	POWER LINE CARRIER	20-R4	5,006,762.55	3,748,600	2,203,978	(1,544,622)
P09	POWER SYSTEMS	18-R3	590,182.62	116,245	193,518	77,273
P10	POWERHOUSE	75-R3	93,181,235.98	13,007,098	27,796,614	14,789,516
P11	PRINTERS	5-SQ	1,010,719.71	572,117	537,553	(34,564)
P12	PROTECTIVE CONTROL & RELAY PANELS	30-R3	4,458,227.98	909,807	1,318,988	409,181
R01	RADIO TOWERS (WOOD OR STEEL)	35-R3	9,331,364.82	6,073,961	2,585,424	(3,488,537)
R02	RADIOS - FIXED MICROWAVE EQUIPMENT	22-R4	5,431,981.92	3,846,942	1,818,655	(2,028,287)
R03	RADIOS - FIXED UHF EQUIPMENT	15-L1.5	114,223.78	18,190	11,681	(6,509)
R04	RADIOS - FIXED VHF EQUIPMENT	19-R3	330,529.66	275,437	180,591	(94,846)
R05	RADIOS - MOBILE VHF BASE STATION	15-R3	4,027,815.31	971,834	707,722	(264,112)
R06	RAMPS - YARD STORAGE	25-R3	1,236,643.69	525,696	398,326	(127,370)

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	DEPRECIABLE WORK	SURVIVOR CURVE	ORIGINAL COST AT DECEMBER 31, 2009	BOOK DEPRECIATION RESERVE	CALCULATED ACCRUED FROM PART V	ACCUMULATED DEPRECIATION VARIANCE
	(1)	(2)	(4)	(5)	(6)	(7) = (6) - (5)
R07	REACTORS & RESISTORS	40-S4	860,433.73	69,734	295,052	225,318
R08	RECLOSERS	40-R4	3,465,827.78	1,683,894	1,293,588	(390,306)
R09	REGULATORS	35-R3	3,777,179.98	1,618,625	1,293,451	(325,174)
R10	RESERVOIR POWER	30-R3				
R11	REVENUE METERING	35-R3	761,706.46	202,490	337,695	135,205
R12	RIGHT - OF - WAYS	55-R4	18,020,542.37	5,989,582	8,016,508	2,026,926
R13	ROADS	50-R4	80,846,786.54	3,979,048	37,610,908	33,631,860
R14	ROUTERS & LAN	5-SQ	6,097,245.86	4,797,798	5,080,419	282,621
R15	RUNNER	33-R5	11,669,901.86	3,427,671	6,246,520	2,818,849
S01	SCADA EQUIPMENT	20-R3	3,427,679.44	1,934,879	1,037,362	(897,517)
S02	SECTIONALIZERS	25-R3	152,708.72	93,118	93,561	443
S03	SERVERS	5-SQ	5,081,124.97	3,626,053	3,739,875	113,822
S04	SEWAGE DISPOSAL SYSTEM	45-R2.5	2,745,341.78	1,708,195	793,538	(914,657)
S05	SOFTWARE	7-SQ	24,077,181.78	19,989,114	18,383,962	(1,605,152)
S06	SPILLWAY STRUCTURES	100-R4	26,949,270.20	252,588	6,931,924	6,679,336
S07	STACKS	40-R4	2,126,667.19	1,368,383	734,917	(633,466)
S08	STATIC EXCITATION SYSTEM	32-R4	8,295,339.31	4,208,323	3,980,185	(228,138)
S09	STATIC EXCITATION - XFORMERS	32-R4	873,229.34	727,374	694,828	(32,546)
S10	STATION SERVICE	40-R4	3,399,370.83	800,120	1,654,025	853,905
S11	STOP LOGS	65-R4	2,780,641.69	275,711	933,680	657,969
S12	STORAGE PALLETS & RACKINGS	30-R3	21,648.13	21,648	15,388	(6,260)
S13	STORM & YARD DRAINAGE	45-R4	1,194,341.65	982,815	631,143	(351,672)
S14	STREET LIGHTS	20-R2	2,546,773.85	637,293	777,077	139,784

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	(1)	(2)	(4)	(5)	(6)	(7) = (6) - (5)
S15	STRUCTURAL SUPPORTS (WOOD OR STEEL)	45-R4	8,609,349.55	3,876,232	4,203,043	326,811
S16	STUDIES	5-R0.5	3,358,184.45	1,444,249	906,999	(537,250)
S17	SUMP SYSTEMS	35-R4	238,638.74	84,300	78,034	(6,266)
S18	SURGE SYSTEMS	45-R3	3,348,520.61	1,702,117	2,060,401	358,284
S19	STATION SWITCHING	45-L1.5	10,667,170.66	3,862,529	2,664,411	(1,198,118)
S20	SWITCHING SYSTEMS - L.V.	60-R5	1,805,689.30	116,296	785,865	669,569
T01	TELECONTROL SYSTEM	27-L1	10,919,784.86	8,230,476	3,191,178	(5,039,298)
T02	TEST EQUIPMENT	20-SQ	2,128,465.42	1,876,474	1,605,467	(271,007)
T03	TOOLS & EQUIPMENT	20-SQ	11,281,655.65	7,613,134	4,960,482	(2,652,652)
T04	TOWERS	65-R3	71,559,609.79	13,980,497	21,233,065	7,252,568
T05	TRANSFORMERS	55-R3	66,582,133.35	25,739,897	23,956,755	(1,783,142)
T06	TRANSFORMERS - PADMOUNT	40-R3	2,379,222.82	807,836	604,624	(203,212)
T07	TRANSFORMERS - POLE MOUNTED	30-R2	16,385,241.31	4,804,173	4,011,500	(792,673)
T09	TURBINES	50-R3	42,852,398.82	3,835,012	16,678,653	12,843,641
V01	VACUUM CLEANING SYSTEM	60-R4	72,451.00	65,210	37,884	(27,326)
V02	VALVES - PENSTOCK	65-R3	6,882,405.29	1,183,261	1,765,082	581,821
V03	VEHICLES - 1 TON	8-L4				
V04	VEHICLES - 3/4 TON AND UNDER	7-L3	3,157,849.72	1,627,287	1,264,247	(363,040)
V05	VEHICLES - BOOMS/BODIES/CRANES/CAB & CHASSIS	15-L1.5	10,935,865.73	7,626,020	2,945,424	(4,680,596)
V06	VEHICLES - CARS, STATION WAGONS & VAN	6-L3	2,088,514.89	1,153,743	895,584	(258,159)
V07	VEHICLES - DUMP TRUCKS	20-L3	20,135.00	18,415	5,186	(13,229)
W01	WATER REGULATING STRUCTURES	55-S4	21,392,991.48	2,437,259	5,844,905	3,407,646
W02	WATER SYSTEMS	30-L4	2,833,440.10	1,121,179	1,248,059	126,880
W03	WATER SYSTEMS - FEED	45-L2	4,197,894.00	3,857,403	2,263,988	(1,593,415)
W04	WATER TREATMENT	34-L4	2,793,278.18	2,101,734	1,496,128	(605,606)
	<b>TOTAL DEPRECIABLE PLANT</b>		<b>1,851,258,222.78</b>	<b>529,577,511.00</b>	<b>637,075,138.00</b>	<b>107,497,627.00</b>