

1 Q. Further to PUB-Nalcor-255, please provide the analysis for Newfoundland Hydro  
2 from 2020 to 2039, showing the impact on the following:

- 3 1) Debt issues  
4 2) Debt retired  
5 3) Revenue requirement (Island Interconnected)  
6 4) Net Income  
7 5) Dividends  
8 6) Promissory notes  
9 7) Capital expenditures  
10 8) % of equity  
11 9) Cash flow/total debt  
12 10) Fixed charge coverage  
13 11) EBITDA interest coverage

14  
15 using the following assumptions:

Scenario	Equity Target	Return on Equity
1	45%	8.50%
2	45%	6.50%
3	45%	5.00%
4	45%	3.50%

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18 A. Please refer to PUB-Nalcor-274, Attachment 1. Please note that Hydro's equity  
19 thickness is currently approximately 19%. For purposes of this exercise, it has been  
20 assumed that Hydro will not receive an equity injection. As a result, Hydro will not

1 meet the equity target of 45% until 2037 under Scenario 1 and Hydro will not meet  
2 the equity target of 45% by 2039 under Scenarios 2 to 4.

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4 The forecast scenarios were completed based upon the assumptions outlined in  
5 Nalcor's response to PUB-Nalcor-049. In addition, please note that the scenarios  
6 can become materially altered based upon changes to key assumptions such as  
7 capital forecast,<sup>1</sup> interest rates,<sup>2</sup> LCP power purchase and transmission costs, and  
8 the value of export energy. For example, the forecast scenarios assume there are  
9 no capital additions for incremental generation. This is subject to change following  
10 the outcome of Hydro's Reliability and Resource Adequacy Study currently before  
11 the Board. In the event there are capital additions for incremental generation then  
12 this could materially change scenario results due to required financing for the  
13 incremental generation.

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<sup>1</sup> Capital additions from 2019 to 2023 are consistent with the Capital Plan filed with Hydro's 2019 Capital Budget Application. Capital additions for 2024 to 2037 are based on a 20 year capital plan forecast, years 2038 to 2039 are based on an average of prior year's additions.

<sup>2</sup> Interest rates for future debt issues based on the Conference Board of Canada's December 2017 forecast of long term federal bonds plus 1% to reflect the estimated cost of Hydro's debt issuances.

**PUB-Nalcor-274, Attachment 1**  
**Rate Mitigation Options and Impacts Reference, Page 1 of 2**

**Additional Scenarios – 45% Equity**

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
<b>Equity Target = 45%; ROE = 8.5%</b>																				
Debt Issues	-	200,000	-	-	-	-	300,000	100,000	-	-	-	300,000	-	-	-	-	100,000	-	-	-
Debt Retired	(0)	0	(0)	(0)	(0)	0	(300,000)	(0)	0	(0)	(0)	(300,000)	0	(125,000)	0	(0)	0	0	(0)	0
Capex	(133,622)	(132,723)	(121,697)	(123,884)	(151,970)	(176,955)	(169,668)	(172,927)	(196,276)	(269,769)	(201,450)	(183,449)	(265,823)	(164,619)	(153,569)	(329,698)	(460,519)	(249,471)	(164,379)	(167,571)
Prom Notes	244,097	161,567	155,777	177,110	217,112	276,174	127,114	57,737	102,356	208,532	235,830	46,085	104,387	95,772	13,686	93,209	182,604	141,913	157,586	173,644
Net Income	35,127	37,534	38,826	44,665	49,679	54,869	59,443	64,400	70,544	80,002	85,426	92,428	102,233	108,733	117,968	132,331	146,840	154,484	160,342	161,009
Dividends	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	491	491	151,863
Equity %	20.0	20.4	21.8	23.2	24.4	25.6	26.9	28.3	29.7	30.6	32.3	34.3	35.7	38.3	41.2	42.4	42.6	45.1	45.1	45.1
Revenue Requirement (Isl Intc)	608,182	1,083,590	1,054,963	1,070,953	1,091,199	1,118,079	1,134,439	1,158,727	1,185,670	1,216,521	1,253,011	1,297,965	1,332,014	1,368,918	1,400,036	1,436,170	1,484,841	1,541,138	1,596,897	1,655,914

**Hydro Consolidated Ratios<sup>1</sup>**

CashFlow/Total Debt (%)	8.70	7.74	7.70	8.24	8.27	8.46	9.00	9.57	9.87	10.10	10.57	11.31	11.85	12.87	14.13	14.40	14.10	15.19	15.64	15.70
Fixed Charge Coverage (x)	1.87	1.84	1.78	1.80	1.82	1.87	1.99	2.08	2.10	2.21	2.31	2.43	2.60	2.80	2.99	3.11	3.22	3.32	3.40	3.41
EBITDA interest coverage (x)	2.83	2.61	2.49	2.58	2.60	2.67	2.88	3.04	3.08	3.23	3.39	3.59	3.84	4.16	4.45	4.61	4.74	4.92	5.07	5.11

**Regulated Hydro Ratios<sup>1</sup>**

CashFlow/Total Debt (%)	6.46	5.55	5.54	6.18	6.31	6.56	7.14	7.72	8.06	8.34	8.81	9.56	10.14	11.09	12.27	12.59	12.44	13.49	13.94	14.00
Fixed Charge Coverage (x)	1.43	1.41	1.38	1.42	1.46	1.51	1.61	1.70	1.73	1.83	1.92	2.04	2.20	2.37	2.55	2.67	2.79	2.90	2.97	2.98
EBITDA interest coverage (x)	2.39	2.18	2.09	2.20	2.24	2.31	2.51	2.66	2.70	2.85	3.01	3.21	3.44	3.73	4.02	4.17	4.31	4.50	4.64	4.69

**Equity Target = 45%; ROE = 6.5%**

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
Debt Issues	-	200,000	-	-	200,000	-	100,000	100,000	-	300,000	-	-	300,000	-	-	-	300,000	-	-	-
Debt Retired	(0)	0	(0)	(0)	(0)	0	(300,000)	(0)	0	(0)	(0)	(300,000)	0	(125,000)	0	(0)	0	0	(0)	0
Capex	(133,622)	(132,723)	(121,697)	(123,884)	(151,970)	(176,955)	(169,668)	(172,927)	(196,276)	(269,769)	(201,450)	(183,449)	(265,823)	(164,619)	(153,569)	(329,698)	(460,519)	(249,471)	(164,379)	(167,571)
Prom Notes	252,872	181,295	187,810	223,280	79,102	156,352	228,623	183,041	253,941	89,372	149,981	298,696	99,233	137,398	108,158	246,509	201,176	232,840	173,211	109,805
Net Income	25,340	26,404	26,270	30,267	33,246	35,913	38,116	40,712	43,879	49,793	50,921	53,934	59,591	60,618	64,422	72,728	80,351	80,214	84,498	90,036
Dividends	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Equity %	19.6	19.6	20.5	21.3	22.0	22.6	23.3	24.0	24.6	24.9	25.7	26.7	27.2	28.6	30.1	30.4	29.9	31.1	32.9	34.9
Revenue Requirement (Isl Intc)	599,453	1,074,044	1,044,550	1,059,329	1,079,834	1,107,013	1,120,208	1,140,994	1,165,920	1,196,707	1,233,338	1,273,278	1,303,906	1,340,204	1,367,794	1,399,817	1,445,239	1,498,403	1,552,834	1,614,058

**Hydro Consolidated Ratios<sup>1</sup>**

CashFlow/Total Debt (%)	8.13	7.09	6.93	7.30	7.18	7.19	7.54	7.88	7.96	7.99	8.13	8.47	8.70	9.11	9.60	9.51	9.13	9.41	10.01	10.56
Fixed Charge Coverage (x)	1.77	1.73	1.67	1.67	1.62	1.60	1.73	1.87	1.87	1.84	1.81	1.98	2.09	2.08	2.18	2.25	2.22	2.19	2.24	2.27
EBITDA interest coverage (x)	2.72	2.50	2.38	2.45	2.36	2.33	2.59	2.83	2.85	2.79	2.75	3.06	3.23	3.25	3.43	3.52	3.46	3.45	3.56	3.61

**Regulated Hydro Ratios<sup>1</sup>**

CashFlow/Total Debt (%)	5.90	4.93	4.80	5.29	5.29	5.37	5.77	6.15	6.28	6.37	6.53	6.92	7.19	7.58	8.06	8.03	7.79	8.08	8.63	9.14
Fixed Charge Coverage (x)	1.33	1.30	1.27	1.29	1.27	1.27	1.38	1.48	1.50	1.48	1.47	1.62	1.71	1.72	1.80	1.87	1.87	1.86	1.91	1.94
EBITDA interest coverage (x)	2.28	2.07	1.98	2.07	2.01	2.00	2.23	2.44	2.47	2.43	2.41	2.70	2.86	2.89	3.06	3.14	3.11	3.12	3.22	3.28

**Equity Target = 45%; ROE = 5.0%**

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039
Debt Issues	-	200,000	-	200,000	-	-	350,000	50,000	100,000	-	-	300,000	-	300,000	-	-	300,000	-	-	-
Debt Retired	(0)	0	(0)	(0)	(0)	0	(300,000)	(0)	0	(0)	(0)	(300,000)	0	(125,000)	0	(0)	0	0	(0)	0
Capex	(133,622)	(132,723)	(121,697)	(123,884)	(151,970)	(176,955)	(169,668)	(172,927)	(196,276)	(269,769)	(201,450)	(183,449)	(265,823)	(164,619)	(153,569)	(329,698)	(460,519)	(249,471)	(164,379)	(167,571)
Prom Notes	259,342	195,614	210,683	55,430	122,031	211,442	46,292	64,906	51,803	205,233	285,548	154,703	278,346	41,720	39,573	208,169	195,827	263,442	242,877	221,846
Net Income	18,124	18,452	17,562	20,495	22,188	24,052	24,941	25,831	27,613	31,834	31,657	32,735	36,025	35,293	36,318	42,128	46,962	43,840	44,991	47,198
Dividends	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Equity %	19.3	19.0	19.6	20.0	20.4	20.6	20.8	21.1	21.3	21.2	21.5	22.0	22.1	22.8	23.6	23.5	22.7	23.2	24.2	25.1
Revenue Requirement (Isl Intc)	593,018	1,067,231	1,037,347	1,053,074	1,073,184	1,097,938	1,112,309	1,134,121	1,158,505	1,186,818	1,219,704	1,260,911	1,290,624	1,325,313	1,354,266	1,384,758	1,428,376	1,479,751	1,532,403	1,591,759

**Hydro Consolidated Ratios<sup>1</sup>**

CashFlow/Total Debt (%)	7.71	6.63	6.40	6.69	6.48	6.44	6.69	6.91	6.90	6.86	6.91	7.11	7.21	7.45	7.70	7.54	7.18	7.28	7.58	7.79
Fixed Charge Coverage (x)	1.69	1.65	1.59	1.53	1.48	1.50	1.55	1.60	1.59	1.62	1.67	1.72	1.80	1.79	1.77	1.81	1.80	1.78	1.81	1.82
EBITDA interest coverage (x)	2.64	2.42	2.30	2.28	2.19	2.24	2.36	2.46	2.45	2.51	2.61	2.73	2.87	2.88	2.86	2.92	2.89	2.90	2.98	3.01

**Regulated Hydro Ratios<sup>1</sup>**

CashFlow/Total Debt (%)	5.49	4.49	4.30	4.71	4.63	4.66	4.97	5.25	5.29	5.33	5.40	5.65	5.81	6.04	6.30	6.20	5.97	6.09	6.37	6.57
Fixed Charge Coverage (x)	1.25	1.22	1.19	1.17	1.15	1.17	1.21	1.25	1.25	1.29	1.33	1.38	1.45	1.45	1.44	1.48	1.49	1.49	1.52	1.53
EBITDA interest coverage (x)	2.20	1.99	1.90	1.91	1.86	1.91	2.02	2.11	2.12	2.17	2.28	2.39	2.52	2.54	2.53	2.59	2.58	2.61	2.68	2.71

**Equity Target = 45%; ROE = 3.5%**

Debt Issues	-	200,000	-	200,000	-	-	350,000	50,000	100,000	100,000	200,000	-	300,000	-	-	300,000	200,000	200,000	-	-
Debt Retired	(0)	0	(0)	(0)	(0)	0	(300,000)	(0)	0	(0)	(0)	(300,000)	0	(125,000)	0	(0)	0	0	(0)	0

**PUB-Nalcor-274, Attachment 1**  
**Rate Mitigation Options and Impacts Reference, Page 2 of 2**

Capex	(133,622)	(132,723)	(121,697)	(123,884)	(151,970)	(176,955)	(169,668)	(172,927)	(196,276)	(269,769)	(201,450)	(183,449)	(265,823)	(164,619)	(153,569)	(329,698)	(460,519)	(249,471)	(164,379)	(167,571)
Prom Notes	265,718	209,537	232,619	86,090	162,122	261,712	107,534	137,952	137,540	204,531	99,302	284,838	125,779	207,703	225,767	114,857	224,948	116,896	122,272	129,342
Net Income	11,013	10,827	9,429	11,657	12,651	13,762	13,854	13,907	14,798	17,961	16,474	16,234	18,734	16,374	16,613	20,929	23,783	19,152	18,332	18,822
Dividends	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Equity %	19.0	18.4	18.7	18.8	18.8	18.7	18.6	18.6	18.5	18.0	18.0	18.1	17.9	18.1	18.4	18.0	17.1	17.2	17.5	17.9
Revenue Requirement (Isl Intc)	586,676	1,060,703	1,030,635	1,046,004	1,065,771	1,090,139	1,104,090	1,125,482	1,149,381	1,177,877	1,212,645	1,252,738	1,281,494	1,315,879	1,341,520	1,373,644	1,418,311	1,469,564	1,523,279	1,581,851
<b>Hydro Consolidated Ratios<sup>1</sup></b>																				
CashFlow/Total Debt (%)	7.30	6.20	5.92	6.15	5.89	5.80	6.00	6.17	6.11	6.04	6.02	6.13	6.21	6.34	6.50	6.32	5.99	6.02	6.18	6.27
Fixed Charge Coverage (x)	1.61	1.57	1.51	1.45	1.41	1.42	1.47	1.51	1.49	1.49	1.47	1.53	1.59	1.59	1.64	1.60	1.55	1.52	1.51	1.51
EBITDA interest coverage (x)	2.57	2.34	2.22	2.20	2.12	2.16	2.27	2.37	2.36	2.36	2.34	2.48	2.60	2.61	2.73	2.64	2.55	2.53	2.52	2.54
<b>Regulated Hydro Ratios<sup>1</sup></b>																				
CashFlow/Total Debt (%)	5.09	4.07	3.85	4.20	4.08	4.07	4.33	4.56	4.56	4.56	4.57	4.75	4.89	5.02	5.19	5.08	4.87	4.92	5.07	5.16
Fixed Charge Coverage (x)	1.17	1.14	1.11	1.09	1.07	1.09	1.13	1.16	1.16	1.17	1.16	1.22	1.27	1.27	1.31	1.29	1.27	1.26	1.25	1.25
EBITDA interest coverage (x)	2.13	1.91	1.82	1.84	1.78	1.83	1.93	2.02	2.02	2.04	2.03	2.16	2.27	2.29	2.40	2.33	2.26	2.26	2.26	2.28

<sup>1</sup> Hydro has calculated both the Regulated and Consolidated ratios because the equity level targets and return on equity are calculated on a Regulated Hydro basis; whereas, DBRS calculates ratios on a Hydro Consolidated basis. Ratios are calculated based on the DBRS method but there may be minor items included by DBRS that are not reflected in these forecasts. As well, there may be items arising in the future that would need input from DBRS on inclusion or exclusion in ratio calculations.