

1 Q. Please provide the forecast revenue requirements for the total Island  
2 Interconnected system for the period 2019 to 2039, inclusive and include the  
3 assumptions used in the preparation of the forecast.

4

5

6 A. The forecast revenue requirements for the total Island Interconnected System are  
7 provided in Table 1 and Table 2 provides Lower Churchill Power (LCP) power  
8 purchases and export values that are included in power purchases. Please refer  
9 Nalcor's responses to PUB-Nalcor-030 and PUB-Nalcor-046 for assumptions relating  
10 to the calculation of the LCP power purchases. The forecast was prepared in  
11 October 2018.

12

13 The assumptions used in the preparation of the forecast include:

- 14 • Return on Equity of 8.50% for the forecast period;
- 15 • Dividends are utilized to ensure equity component of capital structure does not  
16 increase above 25%;
- 17 • The 2019 Test Year and forecast were updated for known General Rate  
18 Application (GRA) settlement adjustments;
- 19 • Interest rates for future debt issues based on the Conference Board of Canada's  
20 December 2017 forecast of long term federal bonds plus 1% to reflect the  
21 estimated cost of Hydro's debt issuances;
- 22 • Revenue requirement does not include Nalcor or Government rate mitigation;
- 23 • Hydro continues to purchase energy from Exploits at 4¢/kWh;
- 24 • Operating costs for 2019 were based upon the proposed 2019 Test Year and  
25 updated for known settlement adjustments. Operating costs have been  
26 escalated commencing 2020 at approximately 2.5% per year;

- 
- 1           • Operating costs reflect an estimate relating to the change in operation of the  
2           Holyrood Thermal Generating Station to a synchronous condenser starting in  
3           2021;
- 4           • The assets at Holyrood Thermal Generating Station that would not be in service  
5           post interconnection will be fully depreciated by March 31, 2021;
- 6           • Capital additions from 2019 to 2023 are consistent with the Capital Plan filed  
7           with Hydro's 2019 Capital Budget Application. Capital additions for 2024 to 2037  
8           are based on a 20 year capital plan forecast, years 2038 to 2039 are based on an  
9           average of prior year's additions;
- 10          • There are no capital additions for incremental generation. This is subject to  
11          change following the outcome of Hydro's Reliability and Resource Adequacy  
12          Study currently before the Board;
- 13          • LCP power purchases commence in September 2020;
- 14          • Hydro's sale of excess energy from Schedule 2 (Muskrat Falls annual  
15          entitlement) and the Recall Block is used to reduce customer rates. The value of  
16          exports is determined using electricity price forecasts based on Intercontinental  
17          Exchange (ICE) forwards dated August 29, 2018 and PIRA Energy Group forecast  
18          dated May 1, 2018;
- 19          • Muskrat Falls pre-commissioning energy in 2020 will have a direct charge of  
20          0¢/kWh;
- 21          • Transmission costs for the use of the Labrador-Island Link in 2019 and 2020  
22          (\$78.3M) are recovered over a 50 year period commencing in 2020;
- 23          • Energy Supply Deferral account balances as of December 31 2018 are recovered  
24          from customers in 2019 to 2021;

- 1 • Load forecast reflects phase in of an increase in domestic rates and assumes
- 2 that average domestic rates will be 17¢/kWh (excluding taxes) by 2023 and will
- 3 escalate at 2% per year starting in 2024; and
- 4 • The load forecast used in the analysis did not include demand and energy
- 5 projections associated with Tacora Resources Inc.

**Table 1**  
**Revenue Requirement - Island Interconnected System**  
**(\$000s)**

	<b>Operating Expenses</b>	<b>Fuels</b>	<b>Power Purchases<sup>1</sup></b>	<b>Depreciation</b>	<b>Return on Debt</b>	<b>Return on Equity</b>	<b>Expense Credits</b>	<b>Total</b>
<b>2019</b>	105,785	145,504	68,680	72,598	82,696	34,075	(3,211)	506,127
<b>2020</b>	110,584	33,236	255,479	78,033	81,962	36,258	(3,105)	592,447
<b>2021</b>	101,803	41,528	751,381	64,071	82,827	38,524	(3,155)	1,076,979
<b>2022</b>	99,307	3,207	758,437	60,976	83,268	40,804	(3,207)	1,042,792
<b>2023</b>	101,035	2,949	765,823	65,543	82,816	44,221	(3,260)	1,059,127
<b>2024</b>	103,591	2,980	783,079	65,031	82,434	47,761	(3,317)	1,081,558
<b>2025</b>	105,424	3,011	802,195	66,659	82,969	51,477	(3,383)	1,108,351
<b>2026</b>	103,370	3,118	816,627	69,780	80,920	54,288	(3,458)	1,124,645
<b>2027</b>	105,223	3,164	833,118	72,454	80,025	56,074	(3,527)	1,146,531
<b>2028</b>	107,136	3,210	845,595	75,262	82,735	58,324	(3,614)	1,168,649
<b>2029</b>	109,086	3,272	858,747	79,097	88,978	61,804	(3,708)	1,197,276
<b>2030</b>	110,861	3,318	878,019	84,502	94,509	64,944	(3,784)	1,232,369
<b>2031</b>	112,905	3,379	910,436	88,109	94,944	66,942	(3,863)	1,272,851
<b>2032</b>	115,081	3,425	930,205	91,460	97,075	69,867	(3,965)	1,303,148
<b>2033</b>	118,127	3,487	950,217	96,973	98,176	72,289	(4,054)	1,335,215
<b>2034</b>	120,351	3,548	969,095	100,365	100,215	73,448	(4,139)	1,362,882
<b>2035</b>	122,630	3,610	990,954	102,355	105,879	76,529	(4,248)	1,397,709
<b>2036</b>	125,055	3,656	1,011,466	107,771	115,042	82,947	(4,379)	1,441,557
<b>2037</b>	128,421	3,729	1,035,731	117,801	122,799	87,843	(4,477)	1,491,847
<b>2038</b>	130,901	3,803	1,079,100	123,023	123,993	89,422	(4,562)	1,545,681
<b>2039</b>	133,537	3,879	1,130,741	125,753	125,726	90,099	(4,648)	1,605,087

<sup>1</sup>Includes LCP purchases, domestic power purchases and is reduced by net export sales.

**Table 2**  
**LCP Power Purchases and Exports (\$000s)**

	LIL	MF	LTA	LCP Revenue Requirement	GIA/PPA Adjustment <sup>1</sup>	LCP Power Purchases	Excess Energy Exports <sup>2</sup>	Total <sup>3</sup>
2020	126,749	117,685	22,503	266,936	(24,437)	242,499	(50,089)	192,410
2021	379,849	293,022	52,887	725,758	19,073	744,831	(57,183)	687,649
2022	376,941	311,350	52,692	740,983	512	741,495	(48,753)	692,742
2023	374,033	328,101	52,557	754,690	3,587	758,277	(46,448)	711,829
2024	371,278	349,849	58,768	779,895	1,265	781,160	(50,011)	731,149
2025	367,886	372,339	63,848	804,073		804,073	(53,941)	750,133
2026	365,111	390,842	66,990	822,943		822,943	(58,568)	764,375
2027	362,265	409,939	70,232	842,436		842,436	(61,767)	780,669
2028	359,811	429,647	73,576	863,035		863,035	(70,097)	792,937
2029	359,578	449,982	77,027	886,588		886,588	(73,440)	813,148
2030	353,995	484,111	82,746	920,852		920,852	(81,160)	839,692
2031	351,038	519,429	88,663	959,130		959,130	(87,102)	872,028
2032	348,628	542,288	92,537	983,453		983,453	(91,879)	891,574
2033	344,175	565,857	96,532	1,006,564		1,006,564	(95,103)	911,461
2034	339,202	590,156	100,649	1,030,007		1,030,007	(99,761)	930,246
2035	335,483	615,203	104,893	1,055,579		1,055,579	(103,571)	952,008
2036	332,845	641,019	109,267	1,083,131		1,083,131	(110,776)	972,355
2037	328,683	668,039	113,774	1,110,496		1,110,496	(113,832)	996,664
2038	333,530	704,053	118,969	1,156,552		1,156,552	(116,538)	1,040,014
2039	351,553	728,150	131,837	1,211,540		1,211,540	(119,904)	1,091,636

<sup>1</sup>Power purchase net of the interest earned on the Generation Interconnection Power Purchase Agreement.

<sup>2</sup>Includes sale of excess energy from Schedule II entitlement, recall and pre-commissioning energy in 2020. Energy costs relating to exports are included Power Purchases.

<sup>3</sup>Total included in Power Purchases. For forecasting purposes export values reduce power purchases.