

1 Q. **Load Forecast, Generation, and Purchases**

2 Please provide tables for the Island Interconnected System test years 2018 and
3 2019 setting out for each rate class the following projections: billing demands at
4 customer meter; coincident peak loads at customer meter and at generator (after
5 provision for losses); 1CP kW at customer meter and at generator (after provision
6 for losses); sales at customer meter and generation energy requirements after
7 losses; number of customers for COSS allocation purposes. Explain all assumptions
8 used to derive these projections.

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11 A. IC-NLH-082, Attachment 1 provides the requested information for the 2018 and
12 2019 Test Years for Newfoundland Power, Island Industrial and Hydro Rural
13 Interconnected.

Newfoundland and Labrador Hydro
Island Interconnected System Load Data from 2018 Test Year Cost of Service

Line No	1 Description	2 Newfoundland Power	3 Industrial Customers	4 Hydro Rural
	Derivation of billing demand for Cost of Service (kW)			
1	Forecast Monthly Power on Order - Praxair		6,000	
2	Forecast Monthly Power on Order - Vale		52,000	
3	Forecast Monthly Power on Order - CBPP		7,000	
4	Forecast Monthly Power on Order - NARL		32,000	
5	Forecast Monthly Power on Order - Teck Resources		500	
6	Subtotal		<u>97,500</u>	
7	Newfoundland Power non-coincident native peak load	1,392,790		
8	Less: Generation Credit	(118,054)		
9	Less: Curtailable Load	<u>(11,000)</u>		
10	Billing demand at Customer Meter (kW)	1,263,736		
11	x twelve months	<u>12</u>	<u>12</u>	
12	Billing demand for Cost of Service (kW)	<u>15,164,832</u>	<u>1,170,000</u>	
	Derivation of coincident peak load at bulk transmission (kW)			
13	Newfoundland Power non-coincident native peak load	1,392,790		
14	Less: Curtailable Load	<u>(11,000)</u>		
15	Customer non-coincident peak load at bulk transmission	1,381,790	97,500	98,507
16	Customer Coincidence Factor (average) ¹	<u>99.3%</u>	<u>88.0%</u>	<u>92.3%</u>
17	Customer coincident peak load at bulk transmission	1,372,117	85,800	90,922
18	Less: Hydraulic Generation Credit	<u>(83,486)</u>		
19	Transmission Coincident peak load for Cost of Service (kW)	<u>1,288,631</u>	<u>85,800</u>	<u>90,922</u>
	Derivation of generation coincident peak load for Cost of Service (kW)			
20	Transmission Coincident peak load for Cost of Service (kW)	1,288,631	85,800	90,922
21	Transmission losses (3.42% loss factor applied to line 19) ²	44,096	2,936	3,111
22	Less: Thermal Generation Credit	<u>(34,568)</u>		
23	Generation coincident peak for Cost of Service (kW)	<u>1,298,159</u>	<u>88,736</u>	<u>94,033</u>
	Derivation of sales at generation for Cost of Service			
24	Load Forecast at transmission voltage (MWh)	5,824,500	726,000	456,083
25	Transmission Losses (4.37% loss factor applied to line 23) ³	<u>254,341</u>	<u>31,703</u>	<u>19,916</u>
26	Sales at generation for Cost of Service	<u>6,078,841</u>	<u>757,703</u>	<u>475,999</u>
	Customers			
27	Praxair		1	
28	Vale		1	
29	CBPP		1	
30	NARL		1	
31	Teck Resources		1	
32	Customers		<u>5</u>	

Notes:

- Industrial Customer Coincidence Factor is forecast at 0.852 for all CBPPL, NARL and Teck Vale is .9, Praxair is 1. The average is 88%.
- Transmission demand loss factor = demand loss percentage (3.309%) divided by (1 minus demand loss percentage)

Newfoundland and Labrador Hydro
Island Interconnected System Load Data from 2019 Test Year Cost of Service

Line No	1 Description	2 Newfoundland Power	3 Industrial Customers	4 Hydro Rural
	Derivation of billing demand for Cost of Service (kW)			
1	Forecast Monthly Power on Order - Praxair		6,000	
2	Forecast Monthly Power on Order - Vale		52,000	
3	Forecast Monthly Power on Order - CBPP		6,000	
4	Forecast Monthly Power on Order - NARL		32,000	
5	Forecast Monthly Power on Order - Teck Resources		500	
6	Subtotal		<u>96,500</u>	
7	Newfoundland Power non-coincident native peak load	1,392,260		
8	Less: Generation Credit	(118,054)		
9	Less: Curtailable Load	<u>(11,000)</u>		
10	Billing demand at Customer Meter (kW)	1,263,206		
11	x twelve months	<u>12</u>	<u>12</u>	
12	Billing demand at Customer Meter (kW)	15,158,472	1,158,000	
	Derivation of coincident peak loads at bulk transmission (kW)			
13	Newfoundland Power non-coincident native peak	1,392,260		
14	Less: Curtailable Load	<u>(11,000)</u>		
15	Customer non-coincident peak at bulk transmission	1,381,260	96,500	96,941
16	Customer Coincidence Factor	<u>99.3%</u>	<u>88.0%</u>	<u>92.3%</u>
17	Customer coincident peak at bulk transmission	1,371,591	84,920	89,477
18	Less: Hydraulic Generation Credit	<u>(83,486)</u>		
19	Transmission Coincident peak loads for Cost of Service (kW)	1,288,105	84,920	89,477
	Derivation of generator coincident peak for Cost of Service (kW)			
20	Transmission Coincident peak loads for Cost of Service (kW)	1,288,105	84,920	89,477
21	Transmission demand loss factor (3.42% of line 19) ¹	44,071	2,905	3,061
22	Less: Thermal Generation Credit			
23	Generator coincident peak for Cost of Service (kW)	<u>1,332,176</u>	<u>87,825</u>	<u>92,538</u>
	Derivation of sales at generation for Cost of Service			
24	Load Forecast at transmission voltage (MWh)	5,833,600	743,300	450,793
25	Transmission energy Loss Factor (4.23% of line 23) ²	<u>246,511</u>	<u>31,410</u>	<u>19,049</u>
26	Sales at generation for Cost of Service	6,080,111	774,710	469,842
	Customers			
27	Praxair		1	
28	Vale		1	
29	CBPP		1	
30	NARL		1	
31	Teck Resources		1	
32	Customers		<u>5</u>	
		<u>1</u>		