

1 **Q. Reference: Volume I, Schedule A-I; and Volume II, Exhibit 4, Section 2.1.1, page 3**

2 Forecast Island Interconnected System transmission losses increase from 207 GWh in the 2019
3 Test Year to 327 GWh in the 2027 Test Year, with 207 GWh of the 2027 losses associated with
4 forecast exports flowing from Soldiers Pond to Bottom Brook for delivery over the Maritime
5 Link.

6 **a)** Describe how export-related transmission losses are treated in the COS, specifically
7 whether the cost of energy consumed as export-flow losses is netted against export
8 revenues or is embedded in losses allocated to domestic load classes.

9 **b)** Quantify the cost of the 207 GWh of export-related losses at the relevant supply cost
10 and identify which classes bear that cost under the proposed study.

11 **c)** If any portion of export-related losses is borne by domestic load, provide the cost-
12 causation rationale, given that net export revenues are shared through the Cost of
13 Service on a system load factor basis.

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16 **A. a)** The Load Loss Model first determines the amount of electricity forecast to be delivered to
17 Island Interconnected Customers. It then adds forecast transmission losses to determine
18 how much electricity must be produced to provide those customer deliveries. For 2027, the
19 model adds the full 327.3 GWh of forecast Island transmission losses and uses this amount
20 to calculate a single transmission-loss factor for the Island Interconnected System.

21 The model does not separately identify or remove the 207 GWh of losses associated with
22 electricity exported from Soldiers Pond to Bottom Brook. The model applies the common
23 transmission-loss factor to Newfoundland Power Inc. ("Newfoundland Power"), Island
24 Industrial and Island Rural Customer loads. As a result, the production energy allocated to
25 domestic Island Interconnected System customer classes includes the additional energy
26 required to supply the export-related losses.

1 **b)** Please refer to Newfoundland and Labrador Hydro’s response to PUB-NLH-036 of this
2 proceeding, which indicates that losses attributable to exports are variable and depend on
3 many factors. If you assume the 207 GWh attributable to exports losses was valued at the
4 average value of exports in the 2027 Test Year of 3.998¢/kWh, the value of lost exports
5 would be \$8,275,860. Under the Cost of Service Methodology, net export revenues are
6 allocated 49.71% to Demand and 50.29% to Energy. Applying these allocation factors to the
7 estimated export loss cost of \$8,275,860 results in \$4,114,155 (49.71%)¹ being allocated to
8 Demand and \$4,161,705 (50.29%) being allocated to Energy. These amounts are
9 subsequently allocated to customer groups using the applicable Demand and Energy
10 allocators, as shown in Table 1.

Table 1: Allocation of Export Transmission Costs

Class	Allocator²	Demand (\$)	Energy Allocation (\$)	Total (\$)
Newfoundland Power	0.8874/0.484	3,650,901	3,530,791	7,181,692
Island Industrial - Firm	0.0498/0.0865	204,885	359,988	564,873
Rural Island Interconnected	0.0628/0.0651	258,369	270,927-	529,296
Total	1.0	\$4,114,155	4,161,706	8,275,861

11 **c)** No portion of the losses is directly borne by domestic load; the allocation to the Rural Island
12 Interconnected Customer group only impacts the rural deficit. The losses due to exports
13 result in less energy being monetized and allocated to customers in the cost of service in the
14 same manner as net export revenue. This is appropriate since the losses are the direct result
15 of exporting energy on the system.

¹ Demand and Energy Allocations based on System Load Factor, Schedule F 4.2

² Schedule F 3.1A Basis of Allocation to Classes of Service, column 4