

1 Q. **Reference: Volume I, Section 6.7; Exhibit 17**

- 2 a) Identify the rate-design principles used to evaluate the proposal and describe how the
3 principles were balanced and evaluated (i.e. economic efficiency, cost causation,
4 revenue adequacy, bill stability, fairness, and simplicity).
- 5 b) Identify any resources used by Hydro or CA Energy in concluding that an hours-of-use
6 rate design is appropriate for the Island Industrial class (i.e. economic literature,
7 regulatory precedents, or other authorities).
- 8 c) Explain why an hours-of-use design provides a superior price signal for this customer
9 class relative to a conventional demand-and-energy rate.
- 10 d) Explain why Hydro did not consider a demand charge based on coincident peak to
11 account for the importance of timing of peak demand in driving system demand costs.
- 12 e) Explain why Hydro did not introduce time-varying elements to this rate design to
13 improve the efficiency of price signals given the importance of grid utilization timing in
14 achieving net benefits.

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17 A. a) As discussed in IIC-NLH-001 of this proceeding, Newfoundland and Labrador Hydro
18 (“Hydro”) limited the proposed changes to the Island Industrial rate to updating the
19 structure to include a Block 2 rate based on the opportunity cost of exports. This was the
20 design contemplated in the Wholesale and Industrial Rate Design Review Update Report.¹
21 The benefits of this design compared to the existing structure are discussed in part c) of this
22 response.

23 b) Please refer to Hydro’s response to part a).

24 The proposed Hours-of-Use (“HOU”) rate design improves upon the current demand-and-
25 energy rate by providing customers with access to Hydro's forecasted marginal energy costs

¹ “Wholesale and Island Industrial Rate Design Review Update Report,” Newfoundland and Labrador, September 30, 2019.

1 while maintaining revenue recovery, cost causation, and manageable bill impacts. The HOU
2 rate provides a superior price signal because a customer's marginal energy consumption is
3 priced based on seasonal marginal energy costs. For most customers, incremental usage is
4 billed at the Block 2 rate, which reflects Hydro's forecasted marginal cost of energy. This
5 creates a stronger link between the price customers pay and the costs imposed on the
6 system. By contrast, a conventional demand-and-energy rate applies a largely uniform
7 energy charge that does not reflect seasonal variations in marginal energy costs.

8 The HOU design also preserves incentives to manage peak demand and improve load factor
9 through the combined effect of the demand charge and Block 1 pricing. As a result,
10 customers receive signals regarding both the cost of increasing peak demand and the cost of
11 incremental energy consumption. Accordingly, the HOU design provides more cost-
12 reflective price signals than a conventional demand-and-energy rate by giving customers
13 access to seasonal marginal energy costs while maintaining incentives for efficient use of the
14 system.

15 Please also refer to the response to CA-NLH-182 of this proceeding.

16 **c)** Hydro did not pursue a Coincident Peak ("CP") demand charge because customers may have
17 limited visibility into when the system coincident peak will occur, making it difficult for them
18 to effectively manage their demand response to that peak. In contrast, customers generally
19 have greater control over and awareness of their own non-coincident peak ("NCP") demand,
20 making an NCP-based demand charge easier to understand and manage. A CP demand
21 charge would also require Hydro to determine the billing demand based on the system peak
22 after it occurs, which can reduce customers' ability to effectively manage load without
23 advance notification of potential peak periods. In addition, Hydro's monthly system peak
24 serves as a proxy for periods when system reserves are at their lowest. A customer's NCP
25 demand is generally a reasonable proxy for its contribution during those periods, supporting
26 the use of an NCP-based demand charge.

27 **d)** Please refer to the response to part e) of PUB-NLH-132 of this proceeding.