

1 Q. **2017 General Rate Application - Operations**

2 Page 3.27, lines 5-7 – Describe how Hydro stays up to date with developments in  
3 generation alternatives such as battery storage technology and wind and solar that  
4 may be of benefit for the isolated diesel communities and whether there are such  
5 opportunities that Hydro is pursuing.

6

7

8 A. Hydro stays up to date with developments in generation alternatives that may be of  
9 benefit for the isolated diesel communities in a number of ways.

10 1. Hydro engages<sup>1</sup> with companies that are developing solutions in this area:

11 a. Wind, battery and solar solutions in Arctic communities;

12 b. Large battery storage on a grid-interconnected system;

13 c. In-stream hydro-electric generators; and

14 d. Biomass-powered generators, among others.

15

16 2. Hydro is a member of the Canadian Off-Grid Utilities Association (COGUA) and  
17 its members discuss more efficient ways of providing service in isolated diesel  
18 communities.

19

20 3. Hydro regularly reviews the literature in this field.

21

22 4. Hydro has recently signed a Power Purchase Agreement (PPA) with a private  
23 developer who plans on refurbishing the Mary's Harbour Hydro plant to

---

<sup>1</sup> Telephone conversations, face-to-face meetings, teleconferences, email, etc.

1           generate and sell power to Hydro. This could displace up to 800 MWh of diesel  
2           energy annually, starting in late 2018.

3

4           5. Hydro is working with the provincial Department of Natural Resources in  
5           developing a request for expressions of interest that could solicit input from the  
6           local, national, and international marketplace for potential renewable energy  
7           solutions in Hydro’s isolated diesel-powered electricity systems.

8

9           6. Hydro is a member of the Nunatsiavut Government Energy Security Working  
10          Group. One of the objectives of the group is implementation of the Nunatsiavut  
11          Energy Security Plan, which includes implementation of sustainable energy  
12          projects in the Nunatsiavut government communities.

13

14          7. The Nunatsiavut Government, in partnership with Hydro, has recently  
15          submitted a *Project Concept Questionnaire* to Natural Resources Canada’s  
16          (NRCan) *Innovative Demonstrations to Reduce Diesel Use* program. This  
17          submission involves developing a smart micro-grid with renewable energy  
18          project for Nain.

19

20          8. Hydro is carrying out a pilot project in Postville to evaluate the effectiveness of  
21          direct load control (DLC) technologies (technology that controls electric  
22          appliances in the customer's site). If successful, it will delay the requirement to  
23          spend capital for the installation of additional generation and transformer  
24          capacity.

- 1           9. Hydro has an Energy Efficiency Department that participates in activities such as
- 2           the takeCHARGE program, seeking to reduce the amount of generation
- 3           required.