

1 **Q. (Reference Application, 4.1 Mount Carmel Pond Dam Refurbishment, page**  
 2 **11) Please provide an analysis similar to that presented in Table 1 that**  
 3 **compares the cost incurred to make the hydro facilities dispatchable to the**  
 4 **value of the additional capacity that can be relied upon by Hydro in its long-**  
 5 **term planning studies. Specifically, provide a comparison of the cost**  
 6 **associated with making the plant dispatchable to the value of the gain in**  
 7 **dependable capacity.**

8  
 9 A. Newfoundland and Labrador Hydro ("Hydro") sets the firm capacity from Newfoundland  
 10 Power's hydro plants based on historical performance during the annual system peak.<sup>1</sup>

11  
 12 The average capacity provided by the Cape Broyle and Horse Chops hydroelectric plants  
 13 during peak over the past five years was approximately 12.95 MW.<sup>2</sup> The combined  
 14 maximum capacity that can be provided by the plants is approximately 14.43 MW.<sup>3</sup>  
 15 Automation of the Mount Carmel Pond Dam provides the opportunity for Newfoundland  
 16 Power to increase peak capacity provided by the Cape Broyle and Horse Chops  
 17 hydroelectric plants by approximately 1.5 MW.<sup>4</sup>

18  
 19 The capital cost to automate the gate structure at the Mount Carmel Pond Dam to  
 20 improve performance during peak winter conditions is approximately \$2.2 million or  
 21 \$1,467 / kW.<sup>5</sup> This compares to the capital costs of hydroelectric resource options  
 22 detailed in Hydro's *Reliability and Resource Adequacy Study* ranging from \$3,345 / kW  
 23 for Bay d'Espoir Unit 8 to \$19,055 / kW for Round Pond.<sup>6</sup>

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<sup>1</sup> In Newfoundland and Labrador Hydro's *Reliability and Resource Adequacy Study Review – 2024 Resource Adequacy Plan*, Newfoundland Power's hydro generation firm capacity is set at 60.1 MW.

<sup>2</sup> See the response to Request for Information NLH-NP-024.

<sup>3</sup> Ibid.

<sup>4</sup> (14.43 MW – 12.95 MW = 1.48 MW).

<sup>5</sup> (\$2,200,000 / 1,500 kW = \$1,467 / kW). This includes the cost of gate, distribution line and telecommunications equipment to remotely control and automate water flows out of the Mount Carmel Pond reservoir.

<sup>6</sup> See Hydro's *Reliability and Resource Adequacy Study Review – 2024 Resource Adequacy Plan, Appendix C, Attachment 1*, page 3.