

1 **Reference: Hydro Plants Refurbishment and Rehabilitation**

2

3 **Q. What action has Newfoundland Power taken to assess whether its approach to**
4 **the asset management of hydro plants has been effective and is consistent**
5 **with good utility practice?**

6

7 A. Newfoundland Power operates 23 small hydro plants with 32 individual generators.¹
8 The asset management of hydro plants consists of an inspection program with
9 preventative maintenance as well as deficiency identification and corrective maintenance
10 as required. The asset management activities for hydro plants are recorded in the
11 Company's computerized maintenance management system Avantis, similar to
12 Substation, Transmission and Distribution asset management activities.

13

14 Preventative maintenance activities are completed by plant operators, maintenance
15 staff, engineering staff, and third parties or a combination of the same, depending on
16 the activity being performed. The frequency of inspections ranges from twice per week
17 by plant operators for the plant itself, to annual or beyond for civil structures associated
18 within the larger development.²

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20 Newfoundland Power also follows Canadian Dam Association ("CDA") guidelines for the
21 completion of dam safety reviews. Every dam is inspected by Newfoundland Power
22 employees on a two-year cycle. Each dam also receives a formal dam safety
23 assessment by a third party based upon its CDA classification.³

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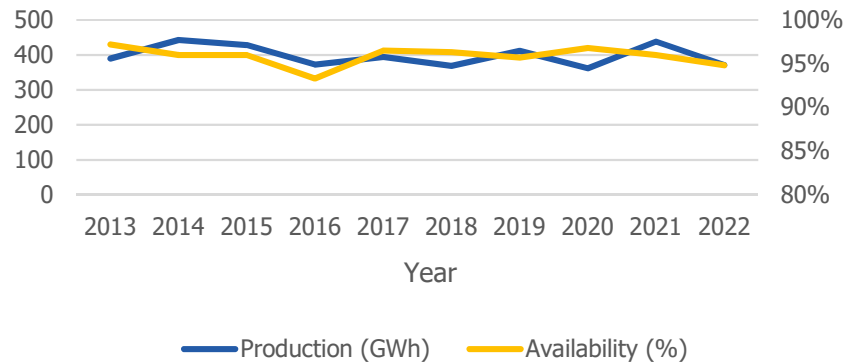
25 The effectiveness of Newfoundland Power's hydro plant asset management practices is
26 reflected in the performance of its hydro plants. Figure 1 shows the annual production
27 and hydro plant availability for the Company's fleet of small hydro plants.

¹ For information regarding the age of the hydro plants, see Newfoundland Power's *2024 Capital Budget Application, 2024 -2028 Capital Plan*, Figure 7, page 13.

² Newfoundland Power identifies preventative maintenance tasks from sources such as Plant Operating Guidelines, Operations and Maintenance manuals provided by manufacturers, and industry best practices. Visual inspections are made twice per week, more involved activities are completed as prescribed in the Plant Operating Guidelines.

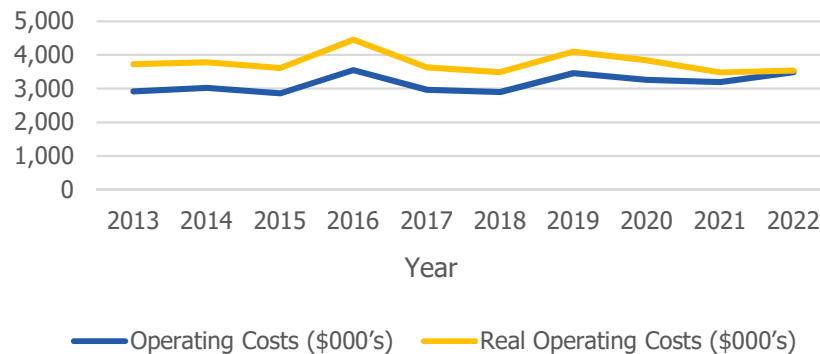
³ Assessment intervals for Newfoundland Power's dams range between five and 10 years.

Figure 1
Hydro Generation Availability and Production



1 Figure 2 shows operating cost in annual and real terms (\$2023) for the Company’s fleet
2 of small hydro plants.

Figure 2
Hydro Generation Operating Cost



3 Newfoundland Power’s hydro plant availability from 2013 through 2022 has averaged
4 96% percent. Similar consistency has been demonstrated in annual production and
5 operating costs. These consistent results confirm that the Company’s asset
6 management of its hydro plants has been effective.

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8 The last third-party review of Newfoundland Power’s hydro plant asset management
9 practices and performance was conducted by The Liberty Consulting Group (“Liberty”) in
10 2014. In its review of Newfoundland Power, Liberty concluded that “*Newfoundland*
11 *Power has been appropriately operating and maintaining a fleet of aged generation*”

- 1 *units.*⁴ Generally, Liberty found Newfoundland Power’s asset management practices
2 across all asset classes to conform with good utility practice.
3
4 Any potential updates to Newfoundland Power’s approach to the management of its
5 hydro plant assets will be subject to the Company’s ongoing asset management review.⁵

⁴ See Liberty, *Report on Island Interconnected System to Interconnection with Muskrat Falls addressing Newfoundland Power*, December 17, 2014, page 64.

⁵ See responses to Requests for Information PUB-NP-017 and PUB-NP-018 for an update of the ongoing review of the Company’s asset management practices.