

- 1 **Q. (Reference CA-NP-121)**
- 2 **a) Does Newfoundland Power use the Distribution Planning Guideline included in**
- 3 **Attachment A to plan its distribution system, or is this a standard document**
- 4 **applicable to Newfoundland Power and Net Metering customers to guard**
- 5 **against substandard customer connections that might lead to unreliability events**
- 6 **impacting other customers? Are any other customers subject to this Guideline;**
- 7 **e.g., customers directly connected to the system who choose to build and operate**
- 8 **their own connection facilities?**
- 9 **b) Attachment B shows that the Banked Energy Credit of 18.165 cents/kWh is well**
- 10 **above the marginal cost of energy which Newfoundland Power indicates is in a**
- 11 **range of 3 to 5 cents/kWh (Application pages 1-8 and 1-9). Given that**
- 12 **Newfoundland Power believes that the wholesale rate should be updated to**
- 13 **reflect the significant change in marginal costs, why has Newfoundland Power**
- 14 **not proposed a similar change in the Banked Energy Credit?**
- 15 **c) How many Banked Energy Credits in kWh have been paid out each year since**
- 16 **2018 and at what cost?**
- 17 **d) It is stated (part f) “The challenge of generating energy at a cost that is less than**
- 18 **the energy that can be provided from the grid is a key constraint for customers.”**
- 19 **The reference in Footnote 7 is from 2018. Please provide a cost comparison of**
- 20 **the costs of solar and wind in 2018 to the present.**
- 21 **e) Newfoundland Power is forecasting a cumulative rate increase of 19% by July 1,**
- 22 **2026 (CA-NP-140). How is this expected to impact the economics of Net**
- 23 **Metering?**
- 24
- 25 **A. a) Newfoundland Power’s *Distribution Planning Guidelines* serves to provide technical**
- 26 **criteria and guidelines for planning the Company’s distribution system. The**
- 27 ***Distribution Planning Guidelines* are based on industry best-practices for distribution**
- 28 **planning, and are informed largely by the Centre for Energy Advancement through**
- 29 **Technological Innovation’s (“CEATI”) *Distribution Planner’s Manual*.¹**
- 30
- 31 **Guarding users of electricity in Newfoundland from “substandard connections” is the**
- 32 **primary role of the *Canadian Electrical Code* and enforced through the provincial**
- 33 ***Electrical Regulations*. Any substandard installation would be in violation of the**
- 34 ***Public Safety Act*.**
- 35
- 36 **Electrical installations and connections of all of Newfoundland Power customers,**
- 37 **including Net Metering customers, are subject to the provincial *Electrical***
- 38 ***Regulations*, and any electrical work performed must be certified by a qualified**
- 39 **inspector or representative prior to energization. In conjunction with all customer**
- 40 **connections requiring adherence to the *Canadian Electrical Code*, Newfoundland**
- 41 **Power follows industry best-practices for protection and control schemes, which are**
- 42 **designed to minimize outages in general through proper coordination of protection**
- 43 **devices.**

¹ The original industry-standard *Distribution Planner’s Manual* was published in 1982 by Electricity Canada (formerly the Canadian Electricity Association), and re-written and expanded in 2013 by CEATI.

b) The Banked Energy Credit is based on Newfoundland and Labrador Hydro’s (“Hydro”) wholesale rate. Any update to Hydro’s wholesale rate would result in a similar change to the Banked Energy Credit.

c) Newfoundland Power’s first Net Metering customers were connected in 2018, and received their first reimbursement of annual Banked Energy Credits in 2019.

Table 1 provides a summary of Banked Energy Credits for the 2019 to 2023 period.

**Table 1:
Summary of Banked Energy Credits
2019-2023**

Year	Banked Credits (kWh)	Value Credited (\$)
2019	7,643	1,100
2020	9,467	1,720
2021	5,157	937
2022	9,460	1,738
2023	7,110	1,379
Total	38,837	6,874

d) Newfoundland Power does not track the cost of small-scale solar and wind equipment year-over-year; however, several third-party websites do provide this information. According to energyhub.org, the average price for solar in the province was \$4.00 per watt in 2023.² In 2019, the average price was \$4.00 per watt.³

The majority of Newfoundland Power customers availing of the Net Metering option have solar installations with capacities of 10 kW and an average estimated annual production of 10,747 kWh. Based on a cost of \$4.00 per watt, this would equate to approximately \$40,000 for a typical installation, or approximately \$3.72/kWh for the first year in service. Based on current residential electricity rates of 13.256 ¢/kWh, the pay-back period of a 10kW solar installation in Newfoundland would be approximately 28 years; however, the typical life expectancy of solar inverters is 10 to 15 years.⁴

e) An increase in electricity rates, in conjunction with solar and wind costs either remaining stable or decreasing, may improve the economics of Net Metering from a customer perspective. For example, if rates were to increase by 19%, the pay-back

² See energyhub.org. *Solar Power Newfoundland and Labrador (2023 Guide)*. Retrieved March 28, 2024 from <https://www.energyhub.org/newfoundland-and-labrador/>.

³ See energyhub.org. *Complete Guide For Solar Power Newfoundland and Labrador 2019*. Retrieved March 28, 2024 from <https://web.archive.org/web/20190420175955/https://www.energyhub.org/newfoundland-and-labrador/>.

⁴ See Forbes. *How Long Do Solar Panels Last?* Retrieved March 28, 2024 from <https://www.forbes.com/home-improvement/solar/how-long-do-solar-panels-last/>.

1 period of the typical 10 kW solar installation as described in part d) of this response
2 would reduce to approximately 24 years.