

Q. (Reference 2.1 – 2027 Substation Refurbishment and Modernization)

Page 21 states "For 2027, Newfoundland Power is proposing to refurbish and modernize BLK, RBK, and MOP Substations."

- a) For each of these substations, please provide a table showing all capital and maintenance expenditures for each of the past 10 years.**
- b) For each of these substations provide a table showing each outage event at these substations over the past 10 years including the number of customers with service interruptions and the time interrupted.**
- c) Please quantify the risk of delaying the Blaketown and Rattling Brook projects by three years and identify the savings if the projects were to be delayed three years.**
- d) Please quantify the risk of delaying by three years the Substation Refurbishment and Modernization Plan, which includes the refurbishment and modernization of 14 substations over the next five years.**
- e) Please provide data for the Substation Refurbishment and Modernization Plan showing that the plan has provided reliability improvements and cost savings.**
- f) Why was NP not aware that the new transformer had a larger footprint than the existing Mobile Plant transformer MOP-T1?**

- A. a)** Table 1 provides the annual capital expenditures recorded with the Rattling Brook ("RBK"), Blaketown ("BLK"), and Mobile Plant ("MOP") substations for the period 2016 to 2025.

Table 1 Annual Capital Expenditures by Substation (2016-2025) (\$000s)			
Year	RBK	BLK	MOP
2016	4	-	-
2017	-	8	-
2018	-	1	-
2019	-	372	-
2020	-	130	104
2021	3,531	213	-
2022	2	32	-
2023	36	2	-
2024	-	18	-
2025	87	6	-
Total	\$3,660	\$782	\$104

Newfoundland Power does not capture operation expenses for maintenance-related costs at the level of individual substations. These costs are captured and reported on an aggregate basis as part of the Company's maintenance programs. As a result, Newfoundland Power is unable to provide the requested maintenance related operating expenses specific to the Rattling Brook, Blaketown, and Mobile Plant substations.

- b) The requested information is available from the Company's Outage Management System beginning in 2019. This type of information was not available prior to 2019. MOP Substation has not been included because it is a generation substation. Outages associated with MOP Substation do not directly result in customer outage records used to compile the requested information.

Table 2 summarizes the unplanned customer interruption events identified as originating inside the BLK and RBK substations during the period 2019 to 2025.

Table 2 Substation Outage Events (2019-2025)					
Substation	Outage Date	Substation Equipment	Customers Interrupted	Total Customer Minutes	Planned/ Unplanned
BLK	3/11/2019	BLK-01-B	1,631	104,384	Unplanned
BLK	6/6/2025	BLK-01-B	1,740	631,620	Unplanned
BLK	7/13/2025	BLK-T2-B	4,053	571,473	Unplanned
RBK	8/3/2025	RBK-T1-B	771	107,940	Unplanned

- c) Newfoundland Power does not quantify risk increases year over year. The risk assessment completed for each substation refurbishment and modernization project proposed in the *2027 Capital Budget Application* is based on the Company's methodology for assessing risk.¹ This methodology assesses the consequence associated with not proceeding with an identified project or program as well as the probability of that consequence occurring if the identified project or program did not proceed.

The risk assessments are point-in-time assessments. Generally, the consequence of failure may change over time, with more material changes occurring over the longer term. Factors that could contribute to the consequence of failure changing over time include customer growth, the presence of new safety or environmental hazards, or changes to costs which may affect the overall economic benefit of not completing an identified project or program.

¹ See the *2027 Capital Budget Application*, *2027 Capital Budget Overview*, Appendix C.

1 Generally, the probability of failure changes over time. Depending on the
2 condition of the asset, the change could be material. Not proceeding with the
3 identified substation refurbishment and modernization expenditures would
4 increase the probability of in-service failures.

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6 It is not expected that delaying these projects would result in any savings as the
7 year-over-year price increases on material and contract costs have been
8 significant, exceeding general inflation rates, and this would offset any savings
9 related to deferred interest costs.²

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11 d) As discussed in part c), Newfoundland Power does not quantify risk increases
12 year over year and, with respect to the *Substation and Refurbishment*
13 *Modernization Plan* (the "Plan"), does not expect to realize any cost savings from
14 doing so.

15
16 The 14 substations currently included in the Plan are included on the basis of
17 asset age and condition.³ Deferring the Plan for three years would generally
18 increase the probability of in-service failures at the substations included in the
19 Plan. The primary consequences of in-service failures at substations are reduced
20 service reliability to a significant number of customers served by those
21 substations and increased costs associated with having to complete corrective
22 maintenance.⁴ As a result, deferring the Plan would be inconsistent with
23 maintaining reliable service for customers at the lowest possible cost.

24
25 Of the 14 substations included in the Plan, one was approved for refurbishment
26 and modernization in Board Order P.U. 38 (2025).⁵ Another three, MOP, RBK, and
27 BLK substations, are proposed in the *2027 Capital Budget Application*. As the
28 remaining 10 substations progress from the planning stage to inclusion in a
29 capital budget filing, the proposed projects will include detailed condition and risk
30 assessments and full justification of the proposed projects consistent with the
31 Board's Provisional Guidelines.

² For example 138 kV breakers saw a 24% increase in pricing in 2026, power transformers saw a 24% increase in pricing, and substation steel saw a 13% increase in pricing in 2026.

³ See the *2027 Capital Budget Application*, report 2.1 *2027 Substation Refurbishment and Modernization*, section 2.2 Substation Asset Assessment, for detailed information on the age and condition of the Company's substation assets and a strategy for addressing these assets during the associated refurbishment and modernization projects.

⁴ Unplanned capital and maintenance work is generally more costly than scheduled work. When work can be planned ahead of time, it can be organized such that multiple deficiencies can be addressed in the same site visit, maximizing the efficiency of the work. Unplanned work often occurs after normal work hours, which results in higher costs. This includes higher labour and contractor costs for work completed on an emergency basis, as well as higher material costs for any materials that are not readily available to undertake the necessary repairs.

⁵ The *Greenspond Substation Refurbishment and Modernization* project was approved in Board Order P.U. 38 (2025).

1 e) It is not possible to quantify reliability in terms of customer outages that did not
2 occur.⁶ Similarly, the Company cannot measure the incremental costs that would
3 have been incurred if the Company had not implemented the Plan in 2007. As
4 such, the requested data cannot be provided.

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6 The Plan was introduced as part of the Company's *Substation Strategic Plan* filed
7 with the *2007 Capital Budget Application*. Newfoundland Power's experience
8 demonstrates that the Plan has delivered operational efficiencies through
9 coordinated project execution while improving the condition, protection,
10 monitoring, and operational capability of the Company's substation fleet.⁷

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12 Newfoundland Power monitors system reliability using established reliability
13 indices such as SAIDI and SAIFI. However, these indices are lagging indicators
14 that reflect the combined performance of many assets and operational programs
15 across the electrical system. Substation refurbishment and modernization projects
16 are justified based on the condition of critical infrastructure and equipment rather
17 than waiting for reliability performance to deteriorate. Waiting for reliability
18 indices to decline before undertaking investment would expose customers to an
19 increased risk of equipment failures and outages.

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21 f) See the response to Request for Information PUB-NP-007.

⁶ Newfoundland Power is focused on maintaining current levels of overall service reliability for its customers under normal operating conditions.

⁷ Not proceeding with the Plan would require the Company to address substation deficiencies through the component replacement alternative or upon in-service failure. For the Assessment of Alternatives to the Plan, see the *2027 Capital Budget Application*, report 2.1 *2027 Substation Refurbishment and Modernization*, page 17. For the Assessment of Alternatives for each substation refurbishment and modernization project included in the *2027 Capital Budget Application*, see report 2.1 *2027 Substation Refurbishment and Modernization*, Appendices A, B and C.