

1 **Q. Reference: "2027 Capital Budget Application," Newfoundland Power Inc., May**
2 **29, 2026, Supporting Materials, Substations: 2.2, Substation Power**
3 **Transformer Strategy, Appendices A-D; and response to Request for**
4 **Information PUB-NP-012, pp. 1-2.**

5
6 **Newfoundland Power states that it does not use prescribed Normal**
7 **Degradation Index thresholds to determine when a transformer should be**
8 **repaired, refurbished, or replaced, but that a Normal Degradation Index**
9 **greater than 0.25 warrants further scrutiny and values above 0.60 highly**
10 **correlate with units whose insulating paper is no longer capable of providing**
11 **reliable service.**

12
13 **Please identify, for each year since Newfoundland Power began utilizing EPRI**
14 **Power Transformer Expert System ("PTX"), the number of in-service power**
15 **transformers that: (i) had a PTX Normal Degradation Index greater than 0.25;**
16 **(ii) had a PTX Normal Degradation Index greater than 0.60; (iii) had**
17 **abnormal PTX condition indices; (iv) received a Code 2 or greater assessment**
18 **from dissolved gas or oil analysis; and (v) were identified through physical**
19 **condition assessment as having deterioration that warranted consideration of**
20 **refurbishment or replacement. For each category, please identify how many**
21 **of those transformers were subsequently refurbished, replaced, or continued**
22 **in service.**

23
24 **A.** Newfoundland Power began utilizing EPRI Power Transformer Expert System ("PTX") as
25 part of its transformer condition assessment process for the *2025 Capital Budget*
26 *Application*. PTX was first presented in Newfoundland Power's *2025 Capital Budget*
27 *Application* to support the replacement justification for power transformers PUL-T2 and
28 GAN-T2.¹

29
30 Newfoundland Power does not use PTX results in isolation to determine whether a
31 transformer should be refurbished or replaced. Rather, PTX results are considered
32 together with other condition and risk information as part of an overall engineering
33 assessment. Accordingly, while PTX has informed Newfoundland Power's overall
34 assessment of transformer condition, replacement or refurbishment decisions are not
35 based solely on PTX results. See the response to Request for Information PUB-NP-015
36 for additional information.

¹ See the *2025 Capital Budget Application*, report 2.2 *Substation Power Transformer Replacements*.

1 Table 1 provides the requested information for each year since Newfoundland Power
2 began utilizing PTX.

Table 1
PTX Data
Inspection Data as of December 31

Description	2024				2025			
	Total Quantity	Quantity Refurbished ²	Quantity Replaced	Quantity Continued in Service	Total Quantity	Quantity Refurbished ³	Quantity Replaced	Quantity Continued in Service
PTX NDI > 0.25	71	-	N/A	71	73	-	N/A	72
PTX NDI > 0.6	5	-	N/A	5	6	-	N/A	6
abnormal PTX Condition > 0	88	-	N/A	88	92	-	N/A	91
TCA >1	8	-	N/A	8	8	-	N/A	8
TASA >1	10	-	N/A	10	10	-	N/A	10
Physical Condition Concern	0	-	N/A	N/A	2	-	N/A	2

3 While only one power transformer has been removed from service since PTX was
4 implemented, several power transformers have been approved or proposed for
5 replacement. Power transformer ISL-T1 was replaced in 2025 and transformers LOK-T1,
6 LOK-T2, and LOK-T4 are scheduled to be removed from service by the end of 2026.
7 These two transformers were approved before the introduction of PTX.⁴

² Newfoundland Power understands that Hydro and Newfoundland Power use the terms "refurbishment" and "maintenance" differently. In order to respond to this Request for Information, Newfoundland Power has assumed that "refurbishment" is required if identified deterioration could not be addressed through on-site corrective maintenance, and, in those cases, the transformer is recommended to be removed from site.

³ *Ibid.*

⁴ See the *2024 Capital Budget Application*, report 2.1 *Substation Refurbishment and Modernization*, Appendix D. See also the *2025 Capital Budget Application*, report 2.1 *Substation Refurbishment and Modernization*, Appendix C.

1 Table 2 provides the requested information for all power transformers removed,
2 approved to be replaced, or proposed to be replaced beginning with the year PTX was
3 implemented.

Table 2 Power Transformers to be Replaced											
Replacement Year	Previously Approved							Proposed			
	2025	2026	2027			2028		2028	2029		
Transformer	ISL-T1	LOK-T1/ LOK-T2/ LOK-T4	GAN-T2	PUL-T2	MOP-T1	KBR-T3	MOL-T2	LAU-T1	HAR-T1	LBK-T1	RRD-T3
PTX NDI > 0.25	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PTX NDI > 0.6	No	No	No	No	Yes	Yes	No	No	Yes	No	No
abnormal PTX Condition > 0	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
TCA >1	No	No	Yes	Yes	No	No	No	No	Yes	No	No
TASA >1	N/A	N/A	Yes	Yes	N/A	N/A	N/A	No	N/A	N/A	N/A
Physical Condition Concern	No	No	No	No	No	No	No	Yes	No	Yes	No