

NOVA SCOTIA ENERGY BOARD

IN THE MATTER OF: THE PUBLIC UTILITIES ACT

- and -

IN THE MATTER OF: AN APPLICATION by NOVA SCOTIA POWER INCORPORATED
to approve CI C0080112 – HYD Big Falls Unit 6 Rotor Re-Insulation
(U&U) - \$1,025,626

REDACTED INFORMATION REQUESTS

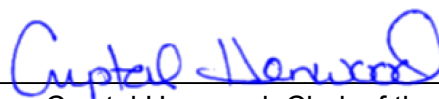
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From: Board Staff
Nova Scotia Energy Board
Responses Due: Friday, November 21, 2025

Copies: 1 electronic copy (PDF searchable)

Contact Person: **Somesh Singh, P.Eng.**
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Issued at Halifax, Nova Scotia, this 30th day of October 2025.



Crystal Henwood, Clerk of the Board

Request IR-1:

The application notes that this project is for the re-insulation of 42 out of 44 rotor poles on Big Falls Unit 6's generator. The remaining two rotor poles were refurbished in 2023 and do not require additional work. The project scope also includes refurbishment of slip rings, brushes and brush boxes, all disassembly work required to remove the rotor poles as well as re-assembly and balancing of the unit when the poles are re-installed.

a) Please provide the total cost of refurbishing two poles in 2023.

b) Please provide the dates when the 42 Rotor insulation was re-insulated.

i. What is the estimated lifespan of a rotor insulation replacement?

ii. Please provide the most recent cost and corresponding dates for the re-insulation of rotor poles.

iii. If the date of the last re-insulation is earlier than the estimated lifespan, please list the possible reasons.

c) Please provide the dates when the slip rings, brushes and brush boxes were last refurbished.

i. Please provide the estimated lifespan for each refurbished component.

ii. Please provide the most recent refurbishment cost for each component along the dates.

iii. If the date of the last replacement is earlier than the estimated lifespan, please list the possible reasons.

Request IR-2:

a) What is the estimated remaining life of the generator?

b) Please provide the power produced by each unit for the past five years.

Request IR-3:

The application notes that Big Falls Unit 6 was taken offline in May 2025 to investigate a potential oil leak:

a) What is the frequency of maintenance performed on the generator/rotor?

b) When was the last maintenance performed prior to the unit being taken offline in May 2025?

i. Please provide the supporting documents.

Request IR-4:

The application notes that comprehensive electrical testing, including AC/DC drop tests, thermal imaging, and visual inspection, confirmed internal issues within the pole windings, suggesting degradation of both insulation and conductor leads. Additional hot spots were identified on the slip rings and brush boxes, further indicating compromised electrical performance.

- a) What are the possible reasons for the degradation of both insulation and conductor leads?
- b) What are the possible causes for hot spots identified on the slip rings and brush boxes?
- c) Does the utility have an aging management program in place for these electrical components? If so, please provide the relevant documentation.

Request IR-5:

Regarding the detailed cost estimate sheet provided on page 5 of the application:

- a) What is the estimated time of completion for this project?
- b) Hydro River Staff – construction estimate cost \$140,000, please provide the breakdown hours associated with this estimate along with the tasks.

Request IR-6:

On page 7 of Attachment 1, the scope of work includes, among other items, incoming testing and testing of completed coils.

On page 8 of Attachment 1, the total cost summary for the complete refurbishment is listed as [REDACTED]. However, the detailed estimate sheet shows [REDACTED] for materials and [REDACTED] for contracts.

- a) Please provide supporting information explaining the difference between the value shown on page 8 of attachment 1 and the combined dollar value of materials and contracts.
- b) Please explain each of the testing costs under the contracts.

Request IR-7:

Page 7 of Attachment 1 notes that the list of 25 poles identified for repair provides a good indication of the overall health of all poles. If only these 25 poles are repaired, there is a high probability that issues will arise with the remaining poles in the coming years.

- a) Besides the vendor's recommendation, what mechanism did the utility follow to determine that all 42 rotar poles require repair and that this is the most cost-effective approach? Please provide any supporting information.

- 1 b) Please explain the basis for the statement indicating a high probability of failure in the
- 2 coming years.
- 3 i. Please describe the potential consequences.