

NOVA SCOTIA ENERGY BOARD

IN THE MATTER OF: THE PUBLIC UTILITIES ACT

- and -

**IN THE MATTER OF: AN APPLICATION by NOVA SCOTIA POWER INCORPORATED
(NS Power) for Subsequent Approval of a Capital Item**

CI C0059783 – HYD Upper Lake Falls 2 Overhaul

NON-CONFIDENTIAL INFORMATION REQUESTS

To: **Lana Myatt**
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By e-mail: Lana.Myatt@nspower.ca

From: **Nova Scotia Energy Board**
Board Staff

Responses Due: **Wednesday, October 08, 2025**

Copies: 1 electronic copy (PDF searchable)

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Issued at Halifax, Nova Scotia, this 16 day of September, 2025.


for Crystal Henwood, Clerk of the Board

Request IR-1:

In the “DESCRIPTION” of NS Power’s application, NS Power notes that “This project is for the refurbishment of Upper Lake Falls Unit 2. The scope includes refurbishment of the turbine, headcover, turbine shaft, turbine bearings and housing, as well as all wear items. A re-alignment of the unit is required to ensure the unit will continue to operate reliably.”

a) Please provide a description of all major systems within Upper Lake Falls Hydro Station Unit 2. If available, include a system drawing. For each system, please outline:

- Their primary functions,
- Key components within each system,
- Typical service life versus current age of those components, and;
- The factors that influence their operational lifespan.

b) Please provide the maintenance and assessment procedures currently in place for Upper Lake Falls Hydro Station.

Request IR-2:

In the “DESCRIPTION” of NS Power’s application, NS Power notes that “Upper Lake Falls Unit 2 was last overhauled in 1999 and is approaching 100 years of service life.”

a) Please provide the detailed scope of work completed during the 1999 overhaul, including the expected service life of each component that was refurbished or replaced.

b) Please provide the detailed scope of work proposed for the current overhaul, along with the expected service life of each component to be refurbished or replaced.

Request IR-3:

a) Please list the scope of work for “2025 CI C0042526 HYD ULF2 Stator Refurbishment \$463,793”.

b) Please confirm whether these Capital Investments (CIs) pertain to separate work not included in the current application.

Request IR-4:

In the “Why do this project” of NS Power’s application, NS Power notes that “The overhaul of Unit 2 ensures continued generation capacity and supports water management operations on the Mersey River, which are critical for downstream safety and system resilience.”

a) Please describe the specific benefits to downstream safety and system resilience that are expected to result from the proposed overhaul of Unit 2.

1 **Request IR-5:**

2 In the “Why do this project” of NS Power’s application, NS Power notes that “Internal condition
3 assessments were completed by NS Power in 2016 and 2023. Based on these assessments, the
4 operating mechanisms (bushings, bearings, links and pins) were found to have excessive
5 clearances.”

- 6 a) Please confirm whether any work has been undertaken to address the issues identified in
7 the 2016 and 2023 condition assessments.
- 8 b) If any work has been completed, please provide a detailed description of the specific
9 activities undertaken and indicate the expected service life of the refurbishment or
10 replacement.
- 11 c) If no work has been completed to date, please indicate when the work is expected to be
12 performed, particularly activities related to the currently proposed project.
- 13 d) Please submit any professional studies or technical analysis reports that support the
14 proposed overhaul work, and explain the decision-making criteria used.
- 15 e) If no formal report is available, please describe the assessment process and the current
16 condition of the operating mechanisms, and list the specific issues identified.
- 17 f) Please identify any internal or external standards or regulations that guided the
18 assessment and decision-making process.
- 19 g) Please explain the timeline and frequency of internal condition assessments at Upper
20 Lake Falls Hydro Station.

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22 **Request IR-6:**

23 In the “Why do this project now” of NS Power’s application, NS Power notes that “The last major
24 overhaul was completed in 1999. A subsequent minor refurbishment was done in 2018 but only
25 addressed components above the headcover without completely removing the unit. Based on
26 condition assessments a complete refurbishment is necessary to address the major issues
27 identified that would otherwise lead to unit failure.”

- 28 a) Please explain the minor refurbishment implemented in 2018.
- 29 i. List the specific work completed during 2018 and indicate the expected service life
30 of that solution.
- 31 b) Please compare the scope of works between the 2018 refurbishment and the currently
32 proposed complete refurbishment.

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2 **Request IR-7:**

3 In the “Why do this project this way” of NS Power’s application, NS Power notes that “Refurbishing
4 this unit through the replacement of specific worn components is the most economical way to
5 achieve the intended project scope, considering both the current condition of its components and
6 the unit’s age. This approach meets all the requirements and constraints of the intended project
7 scope and is significantly more economical than a full unit replacement.”

- 8 a) Please compare the scope of work between the proposed overhaul project and a full unit
9 replacement, highlighting key differences in approach and deliverables.
10 b) Please provide a cost estimate for both the overhaul and the full unit replacement,
11 including a breakdown or rationale for the cost difference.
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13 **Request IR-8:**

14 In the “Why do this project this way” of NS Power’s application, NS Power notes that “This
15 overhaul will maintain the reliability of Upper Lake Falls 2 and ensure the unit remains available
16 to support ongoing water management on the Mersey River. Running the unit to failure is not
17 considered a technically feasible option due to the negative impacts its unavailability would have
18 on ongoing water management operations.”

- 19 a) Please list all safety concerns and operational risks associated with the option of running
20 the unit to failure.
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22 **Request IR-9:**

23 In the “Reason for Variance” of NS Power’s application, NS Power notes that “The decrease of
24 \$96,139 from the 2025 ACE Plan subsequent submittal estimate of \$1,678,153 is due to updating
25 the project scope resulting in fewer contracts and less labour than previously estimated.”

- 26 a) Please explain why the project scope was revised after the submission of the proposal in
27 the 2025 ACE Plan and provide additional details on what specific work was undertaken
28 to refine the scope.
29 b) Please provide the original project scope as outlined in the 2025 ACE Plan budget
30 (\$1,678,153) and identify which components of the work are now considered unnecessary,
31 along with the reasoning for their exclusion.