

NON-CONFIDENTIAL

Request IR-1:

The project was included in the 2025 ACE Plan with an estimated cost of \$1,346,809 and was deferred to 2027. In the 2026 ACE Plan, the estimate increased to \$2,457,629, and the current submission is \$3,603,351. Please explain the reasons for the change in project timing and the increases in the estimated cost. In addition, provide a comparable cost breakdown for each estimate using the same level of detail presented on page 3 of this application.

Response IR-1:

This project was included in the 2025 ACE Plan as a project for subsequent submission. The Q4 2025 Capital Reports noted that this project was deferred to 2027 in error; it should have stated that the project was deferred to 2026, as the project was included in the 2026 ACE Plan as a project for subsequent submission. There was no change in project timing aside from the deferral from 2025 to 2026 to better define the project scope.

The increase in the estimated cost between the 2025 ACE Plan and 2026 ACE Plan is largely due to an increase in project scope, which also increased material and additional service estimates (such as flagging, rock breaking, pole haulage, environmental and other permits). The condition of a number of the structures included in this project deteriorated between inspections in 2024 and 2026. This change in condition has increased the likelihood of unplanned power interruptions due to potential asset failures. Updated condition assessments resulted in an increase in scope from 41 affected structures to 52. The addition of these 11 structures along with the added requirement of performing structure and asset replacements under live line conditions increased the projected number of working days from 47 in the initial estimate to 70. Additionally, CU rates for the contractor work increased by 2% between the 2025 and 2026 estimates.

The subsequent submittal cost estimates included in the 2025 and 2026 ACE Plan were high-level estimates, completed prior to detailed project costing was complete. Therefore, a detailed cost

CI C0061552 – L6043 Replacements and Upgrades (NSEB M12837)
NSPI Responses to NSEB Information Requests

NON-CONFIDENTIAL

- 1 estimate cannot be provided at the level of detail as was provided in the application. Please refer
- 2 to Attachment 1 for the high-level estimates.

Execution Year: 2026

Note 1: The labour figures noted above are an average of salaries across a variety of jobs within similar classifications including fringe, and are used solely for budgeting purposes.
Note 2: Small differences in totals are attributable to rounding.

Execution Year: 2026

Note 1: The labour figures noted above are an average of salaries across a variety of jobs within similar classifications including fringe, and are used solely for budgeting purposes.
Note 2: Small differences in totals are attributable to rounding.

NON-CONFIDENTIAL

Request IR-2:

Please explain how the lot Unit Estimates for Wood Poles, Insulators, and O/H Conductors under each of “Materials’ and “Contracts” were calculated and explain any differences in unit prices used for the calculations.

Response IR-2:

The total cost of the project is split between the labour (regular and overtime), material, and contract estimates based on the percentage of the scope that involves installing or replacing wood poles, insulators, and O/H conductors. Within each of these three line items, the cost is separated into the procurement of materials and the contractor’s Compatible Unit (CU) estimates per installation and replacement Under “Materials”, lot unit estimates for wood poles, insulators, and O/H conductors are calculated based on established NS Power CUs used to procure each type of pole (specific to the wood type, height, and pole classification required for each structure), insulator, and conductor required within the scope. This is an estimate of the total cost of procuring each material type within the three line items listed. Under “Contracts”, the lot unit estimates are calculated based on the contractor’s CU rates to install the new poles and assets, as well as to remove (when replacing) the current assets on the line. This is an estimate of the cost of the contractor installing or replacing each of the three items, wood poles, insulators, and O/H conductors. Please refer to IR-5 for more details on CUs.

NON-CONFIDENTIAL

Request IR-3:

- (a) Please provide the evidence supporting the decision to advance this project based on asset deterioration. Identify the affected assets and summarize the inspection results, condition assessments, or other supporting evidence that demonstrates the need to proceed.**
- (b) Compare the condition of the assets at the time the project was deferred to 2027 with their current condition, and describe:**
- (i) Any deterioration that has occurred since the deferral and its extent;**
 - (ii) The impact of this deterioration on the project's timing, scope, and estimated cost; and**
 - (iii) The risks to asset reliability and service continuity if the project is deferred further.**

Response IR-3:

- (a) As explained in IR-1, this project was deferred to 2026, not 2027. Inspections were carried out on all 52 structures in 2024. Fifteen structures were assessed with increased damage and wear on the poles and had failed their inspections. Two of these structures, 014 and 110, along with three other structures, 119, 120 and 129, also had pole top rot identified on them. Twenty-six structures, including those noted above, were noted to have woodpecker hole damage, while twenty-five structures also have been noted for significant insect activity which has reduced the shell thickness on some of the poles and the accelerated rot on them.**
- (b) As explained in IR-1, the Q4 2025 Capital Reports listed this project as deferred to 2027 in error.**

NON-CONFIDENTIAL

- 1 (i) Increased rot, insect, and woodpecker activity are the main causes of deterioration
2 of the condition of the poles. Woodpecker holes, particularly close to hardware
3 connections on structures are a concern as they can reduce the structural integrity
4 of the poles.
5
- 6 (ii) The nature of the insect and animal related damage is not typically a deficiency that
7 can be tracked linearly, as compared to some of the pole rot identified that would
8 be more likely due to weather and general wear of the components over time. These
9 specific damages triggered NS Power to reprioritize the intervention earlier than
10 expected for typical wear on these structures. The increase in scope is a main
11 contributor to the additional requirement to perform these replacements under live
12 line conditions, causing a further increase to the cost estimate.
13
- 14 (iii) As L-6043 is a radial transmission line, asset failure on one of the structures could
15 cause an outage to the line and connected substation. This has the potential to affect
16 over 10,000 customers. Beginning the work to replace the poles and other assets,
17 particularly those with the most significant deterioration, in 2026 is vital to
18 minimize the potential customer impact. With increased deterioration identified
19 within the last 24 months, deferring this project further could pose a risk of failure
20 of the poles and other line assets already due for replacement.

NON-CONFIDENTIAL

Request IR-4:

Please provide details of all outages and maintenance activities associated with the line over the past five years, including:

- (a) The date, duration, and cause of each outage;**
- (b) The maintenance work performed, including whether it was planned or unplanned;**
- (c) The annual maintenance costs incurred; and**
- (d) Any trends or recurring issues that have contributed to the need for this project.**

Response IR-4:

- (a) Outages to this line within the past five years were due to weather events (wind, rain, and lightning).
 - October 19, 2022: High winds caused hardware failure that damaged the overhead conductor affecting 9,727 customers for 3 hours before the line was sectionalized to restore power to 5,371 affected customers at 126H (Porter's Lake Substation). The rest of line was restored 17 hours later, restoring power to the remaining 4,356 customers at 87H (Musquodoboit Harbour Substation).
 - July 24, 2024: A lightning strike caused an outage to this line affecting approximately 10,000 customers. No significant damage was found, and the line was able to be returned to service within 4 hours.
 - March 29, 2026: A lightning strike caused an outage that lasted approximately one hour. No damage was found before the line was returned to service.

NON-CONFIDENTIAL

1 (b) Unplanned maintenance work on this line consisted of the repairs required for the outage
2 in October 2022 described in part (a) above. This included repair of the affected structure
3 and overhead conductor. Once the line was fully restored, further structure repairs were
4 completed as planned maintenance under live line conditions. This was the only planned
5 maintenance that was scheduled on the line prior to this project's filing.
6

7 (c) Maintenance costs incurred are related to the unplanned maintenance work due to outages
8 on the line and was captured under a transmission routine program, T001. In 2022
9 maintenance costs totalled \$26,012.60. In 2024 maintenance costs totalled \$14,677.51.
10 This project is the first large scope of planned maintenance and replacements on this line.
11

12 (d) A growing number of weather events, including lightning strikes, are causing more
13 frequent trips on the line. While the potential for damage is not always consistent, damage
14 due to a lightning strike or high force winds will likely cause an outage. As with outage
15 events on this line in the past, even a brief power trip affects nearly all the customers on
16 the line, with restoration times varying based on the section of the line in which damage is
17 found. Broken and damaged insulators, along with weakened poles increase the likelihood
18 of potential outages. For all structure replacements within this project the poles will have
19 grounds and bonding clips installed to ensure they are adequately bonded to the overhead
20 shield wire to enhance lightning protection.

NON-CONFIDENTIAL

Request IR-5:

Please provide details of the contracted work for the project, including:

- (a) The procurement process undertaken, including the procurement method, number of bidders, evaluation process, and the basis for contractor selection; and**
- (b) Comparison of contract rates and prices with recent comparable work.**

Response IR-5:

- (a) NS Power has an existing line services agreement with Connect Atlantic Utility Services (CAUS) for transmission line work. This includes the work procedures required to perform the majority of the scope of this project under live line conditions. The CAUS contract for the line services agreement was awarded following a competitive RFP process. NS Power invited 10 proponents to bid; four proponents ultimately submitted a proposal, and after review, evaluation, and negotiations, Connect Atlantic Utility Services was the successful proponent and a contract was awarded.
- (b) Compatible Units (CUs) are used for all comparable transmission line work between NS Power and CAUS. Each CU has a labour and material rate associated with it, which allows for an itemized list of every task required to complete the scope of the project. The labour rates were negotiated as part of the line services agreement with CAUS for 2026. Live line structure and asset replacements have primarily been conducted on lower voltage 69 kV transmission lines. This is the first large project on a 138 kV transmission line that CAUS will be completing under live line conditions, so the contract estimate includes additional CUs that were required to safely perform this type of work on a higher voltage line. As a result, there are no direct comparable projects in recent years.