
Nova Scotia Energy Board

IN THE MATTER OF

The Maritime Link Act, S.N.S 2012 c.9
and the
Maritime Link Cost Recovery Process Regulation, N.S. Reg. 189/2012

NSPML Quarterly Report Q3, 2025

REDACTED
(Attachments Only)

October 15, 2025

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1 **1.0 INTRODUCTION**

2
3 This is the Q3 2025 Quarterly Report for the Maritime Link as directed by the Nova
4 Scotia Energy Board (“Energy Board” or “Board”; formerly the Nova Scotia Utility and
5 Review Board) where the Energy Board ordered in its Supplemental Decision:

6
7 [115]....detailed reports must be filed by NSPML on a semi-
8 annual basis, on June 15 and December 15 each year. The reports
9 shall commence December 15, 2013. Updated status reports must
10 be filed quarterly.

11
12 As per the Energy Board’s order in its Decision regarding NSPML’s Application for
13 final approval of Maritime Link Project Costs and approval of the 2022 cost assessment
14 (M10206), NSPML continues its quarterly reporting to the NSEB by way of this Report.

15
16 Given that the benefits to ratepayers of the Nova Scotia Block and Newfoundland &
17 Labrador (Nalcor) market-priced energy are secured by Nova Scotia Power through the
18 Maritime Link, Nova Scotia Power continues to report on these in its Quarterly Maritime
19 Link Benefits Report.

1 **2.0 UPDATE OF THE MARITIME LINK**

3 **2.1 Safety and Environment**

5 Safety is a fundamental core value and integral part of every aspect of NSPML's
6 business. NSPML continues to be risk-focused on the assessment of all work activities.
7 There have been no internal recordable safety incidents to date in 2025, and no
8 environmental incidents. Focus on safety will be critical with the anticipated upcoming
9 rock protection for the submarine cable. Thorough high-risk reviews have recently been
10 conducted with NSPML management, external experts, and the contractor selected to
11 complete the work.

13 **2.2 Land Access Agreements**

15 The majority of land rights are now in place. In NS, NSPML continues to progress
16 towards expropriations for 54 parcels of land, many of them being small anchor
17 easements where the anchor for the transmission line towers is underground. These
18 easements do not affect the ability of the Project to operate according to plan. The related
19 land matters in NL had been with the expropriation panel as per the process originally
20 instituted by the Newfoundland & Labrador government; however, as previously
21 reported, NSPML has recently learned that the expropriation panel is not presently
22 available. Given this recent development, NSPML continues to work with NL
23 Government to determine how to finalize these matters. All lands have been
24 expropriated; however, there are some lands where owners could not be found where
25 funds will be paid into trust, as well as a claim regarding mineral rights.

27 **2.3 Joint Development Agreements**

29 The Regulation Service Agreement between NS Power and Nalcor (NLH) has
30 progressed pending establishment of protocols for usage by NS Power. NLH has
31 completed their filing of the Regulation and Service Agreement (between NS Power and
32 NLH) with the NL PUB and there is now a tariff for regulation service in Newfoundland

1 & Labrador. NS Power continues to work with NLH to finalize the associated protocols.
2 It is noted that operations are not constrained by this.

3
4 **2.4 Submarine Cables**

5
6 As previously discussed in the Maritime Link Quarterly Reports, NSPML plans to
7 complete further cable protection with rock in the near future. NSPML finalized the
8 marine construction contract in January 2025. NSPML filed a capital application for the
9 Submarine Cable Protection Project (M12285) in May of 2025, with responses to
10 information requests filed on July 28, 2025, and intervenor evidence from the NSEB's
11 expert filed August 25, 2025. NSPML's Reply Evidence will be filed on October 15.

12
13 NSPML is currently planning to perform a nearshore subsea investigation of rock berms
14 at HDD (Horizontal Directional Drilling) exit locations in Q4. The report will be filed
15 with the NSEB once it is completed.

16
17 With respect to NSPML's Subsea and Land Cable Maintenance and Repair Plan
18 ("Plan"), NSPML confirms that there have been no changes made to the Plan in this
19 quarter.

20
21 **Update on CCI Recommendations**

22
23 During NSPML's oral argument on October 30, 2024 regarding NSPML's 2025
24 Assessment (M11792), Vice Chair Deveau inquired as to whether there was any update
25 on recommendations 2 and 3 from CCI regarding NSPML's Final Project Cost
26 proceeding (M10206) in 2021¹. NSPML provided an update in the Quarterly Report for
27 December 2024.

¹ Recommendation number 1 is closed.

1 There are currently no further updates; however, NSPML will continue to provide this
2 and other updates as applicable to the Board and stakeholders through its Quarterly
3 Report.

5 **2.5 Converters and Substations**

7 The Converters and Substations have been in service since January 2018 and continue
8 to perform well.

10 The Maritime Link has maintained strong availability achieving 96.50% Energy
11 Availability (percentage of the year that 500MW would be able to transfer across
12 Maritime Link) and 100% Monopole Availability as of the end of September.

14 **2.6 Transmission Lines**

16 The overhead transmission system continued to perform well with no significant
17 reliability or availability issues experienced. Drone inspection was successfully
18 completed in July on parts of the HVDC and HVAC transmission lines, details and
19 images produced were of high quality and aligned with program expectations. A second
20 helicopter inspection of all lines will be completed later in 2025 to help ensure winter
21 readiness.

23 **2.7 Annual Maintenance**

25 NSPML completed a successful maintenance outage during the period of September 15-
26 22. All maintenance outlined in the annual maintenance plan was completed. Key
27 equipment that was inspected and maintained included fire systems, valve cooling,
28 converter transformers and reactors. Cyber security updates were also completed on the
29 control systems equipment. Additionally, a number of remaining warranty items that
30 were outstanding with Hitachi were closed.

Monopole connectivity was maintained throughout the planned outage period.

2.8 Independent Engineer

NSPML remains engaged with the Independent Engineer (IE) related to the Operations phase of the Maritime Link, as per the Federal Loan Guarantee requirements.

The IE completed a site visit of NSPML's assets in Newfoundland and Labrador in late July; please refer to Attachment 1 for a copy of the Report, and Attachment 2 for the 2024 Annual O&M Report.

2.9 Status of Nalcor Project and Muskrat Falls

Muskrat Falls Assets

Unit 2, which had been offline since Q4, 2024 to resolve the historical vibration issue that impacted ramping capability and to perform other maintenance activities; was placed back into service in August and all units are currently in operation.

Synchronous Condensers at Soldiers Pond

All three units are available and operating normally as required and as dispatched by the NLSO subject to normal operating practice and maintenance requirements.

Labrador Island Link

The Labrador Island Link (LIL) continues to perform well. The 900 MW (LIL) test is planned for late 2025; however, the prerequisites for the test to occur include coordination with all relevant neighbouring system operators and ensuring presence of a high enough system load. It is possible the test may shift to 2026 should these conditions not occur.

1 The LIL underwent planned outages from September 15-22 on Pole 1, September 21-
2 30 on bipole, and from October 1-10 on Pole 2. There was an unplanned outage on the
3 LIL on October 7 for less than 24 hours caused by a failed switch at an electrode site.
4

5 **2.10 Status of Benefits to NS Power Customers**
6

7 With Newfoundland & Labrador Hydro's commissioning of the Labrador Island Link early
8 in 2023, all aspects of the Muskrat Falls Project are now fully operational, supporting
9 significant use of Emera's Maritime Link and providing substantial benefits to customers
10 in both Nova Scotia and Newfoundland & Labrador.
11

12 Customer benefits received to date are being reported by NS Power with its Quarterly
13 Maritime Link Benefits Report and otherwise in accordance with the Board's directions
14 in Decision M10206.
15

16 Since the Labrador Island Link (LIL) commissioning in April 2023 through the end of
17 September 2025, delivery levels (including purchased) are approximately 174% of the
18 contracted NS Block and approximately 181% YTD in 2025.

1 **3.0 UPDATED COST SUMMARY**

2
3 NSPML continues to track and report costs, actual and forecast, consistent with the
4 methodologies used in the cost forecast represented in the Maritime Link Project
5 Application. Capitalized Project costs reported to the end of June 2025 have been
6 updated to reflect the Board's Decision in relation to unrecoverable costs. Costs
7 continue to be recorded in accordance with the Affiliate Code of Conduct. All costs
8 provided are in Canadian dollars.

9
10 Actual AFUDC has been tracked and recorded monthly up to December 31, 2017 and
11 has been adjusted from approximately \$209 million to approximately \$208 million in
12 accordance with the Board's Decision, and below the \$230 million amount originally
13 estimated.

14
15 **Total Actual Project Costs as of the end of Q2 2025**

16
17 In Q2 2025, NSPML's capital cost incurred was \$54,433 for a total of \$280,569 year to
18 date. A total of \$24,746 is attributed to the ML Project capital, primarily relating to
19 outstanding land matters. A total of \$255,823 is attributed to sustaining capital costs
20 relating to routine capital expenditures as well as preliminary engineering costs relating
21 to the submarine rock installation project.

22
23 The final project closeout and any associated adjustment to final project costs will be
24 filed with the Energy Board once the outstanding land matters (which are currently
25 undergoing expropriation processes in both NS and NL) and legal claims are finalized.

1 **4.0 2025 ASSESSMENT FINANCIAL UPDATE**

2

3 NSPML receives monthly cost recovery revenues from NS Power pursuant to the

4 Board's order.

LCP - ML PROJECT

SITE VISIT REPORT JULY 28 TO 31, 2025

Prepared for: Natural Resources Canada and NSP Maritime Link Inc. (NSPML)

IE Point of Contact: Nik Argirov

Date: August 28, 2025

Quality Assurance Statement

Office Address	803-633 Kinghorne Mews, Vancouver BC, V6Z 3H3
Prepared by	Nik Argirov, Vlad Kahle and Hamdy Khalil
Reviewed by	Nik Argirov
Approved for Issue by	Nik Argirov

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1. GENERAL

On July 29th and 30th Independent Engineer (IE) team visited Bottom Brook Converter Station, Indian Head Electrode Site and Cape Ray Transition Compound and conducted visual spot checks of HVDC transmission line towers as well as the HVAC line locations. NSPML management arranged the transportation and organized the visits to the sites as well as the meeting at Bottom Brook station. Natural Resources Canada representative attended the virtual meeting at Bottom Brook. Transportation to the sites was by road. Eric Cayouette coordinated the meetings and prepared the reference document.

Ref: Maritime Link Summer 2025 Update dated July 30, 2025

IE team: Nik Argirov (IE Team Lead)

Vlad Kahle (IE Electrical SME)

Hamdy Khalil (IE Transmission Lines SME)

Trip itinerary:

July 28:

- Travel to Deer Lake

July 29:

- HVDC line visual inspections
- Cape Ray transition Compound and HDD site visit

July 30:

- Bottom Brook station visits and IE meeting
- Indian Head electrode site visit
- HVAC line visual inspections

July 31:

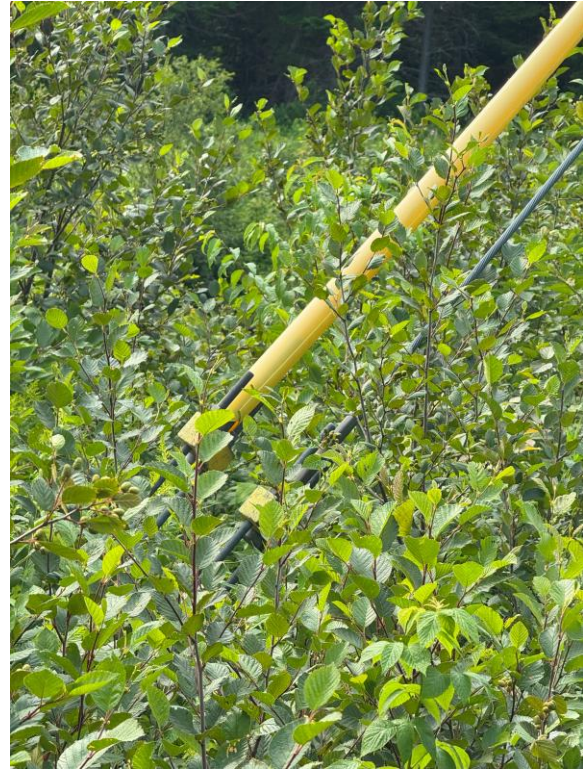
- Travel to home bases

2. TRANSMISSION LINES SITES – JULY 29, 2025

2.1. HVDC Line

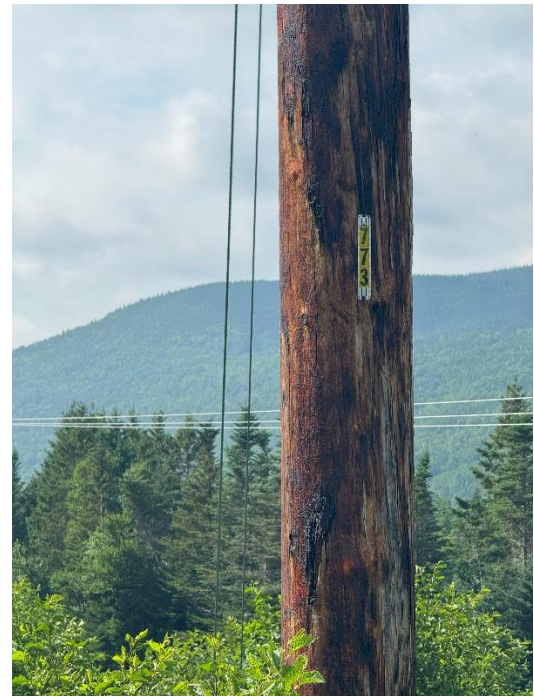
- Tower 55, 56, 124, 259 and 260 bases and guy wire anchors were visually inspected
- The transmission line is well maintained and in good condition. However, a missing cotter pin was observed at the guy wire of Tower #055.
- The right-of-way has been cleared, maintained, and treated. Although the vegetation is low, localized vegetation growth at certain tower locations may obstruct drone-based inspections of tower bases and anchors, and should be addressed.
- The following photos were taken on site:





2.2. HVAC Transmission Line

- Structures 705, 706, and 773 bases and guy wire anchors were visually inspected
- The transmission line has been well maintained and is in good order.
- The right-of-way has been maintained, cleared, and treated. As with the HVDC line, although the vegetation is low, localized vegetation growth around tower bases and anchor points may obstruct visual observations and inspection activities. Targeted vegetation management should be implemented to mitigate these limitations.
- The team has visited multiple structure locations. They all look in good order including guy wires, and right of way access. The following photos were taken on site:



3. MARITIME LINK PROJECT SITES – JULY 29 AND 30, 2025

3.1. Cape Ray Transition Compound Site

- The facility has been well maintained and is in good order.
- Cable temperature monitoring is in service.
- Corroded ground wires were primarily observed in the transition compound, with additional instances noted at several tower locations.

3.2. Cape Ray HDD Site

- The cable trench extending from the Transition Compound to the HDD site is in good condition and has been consistently maintained.
- Minor vegetation encroachment has been noted, and localized management may be required in the near term.

3.3. Indian Head Electrode Site

- The facility has been well maintained and is in good order.
- There are no operational, security or maintenance concerns currently.



3.4. Bottom Brook Converter and Switchyard Site

- The facilities have been well maintained and are in good order.
- Reactor hall door experienced heat induced buckling that initiated a 'door open' trip. Solutions to improve reliability of this interlock are being explored.
- SPS installation has been completed, and the system is in final stages of commissioning.
- New Geomagnetic Induced Current (GIC) sensors were installed to aid in monitoring GIC's effect on the converter transformer fleet.

Bottom Brook Special Protection Cabinet



4. MARITIME LINK UPDATE SUMMER 2025

Update meeting was held at the Bottom Brook converter station in conjunction with IE site visit. Emera management and Natural Resources representatives joined the meeting virtually.

a) Safety

- No issues have been identified.

b) Inspections

- Two helicopter patrols of each HVDC line are planned for 2025: in Q2 (NL complete, NS complete) and in Q4.
- Drone inspection of transmission line structures in 2025 will be conducted in areas more challenging to access in order to re-assess primarily TL269 for potential fall work/outage.
- Drone inspection found a shackle bolt that had backed out on the OPGW wire on HVDC structure near Bottom Brook converter station. Repairs were carried out on July 30th.
- Wildfire crossed TL 269 between structures 306 and 310. There was no visible damage.

c) Vegetation Management

- The Vegetation Management team at NSP is presently conducting an analysis of LiDAR data to assess current vegetation conditions. The results of this evaluation will inform the definition of the scope for multi-year treatment initiatives throughout NL.
- At a minimum, targeted areas in NL will undergo treatment to preserve trail access required for drone-based inspections. Specific issues identified during the IE site visit—including the absence of a guy wire cotter pin on one structure and localized vegetation management requirements to facilitate drone inspection—will be addressed and subject to appropriate follow-up actions.
- In NS, higher risk areas along the grounding line are scheduled for treatment in 2025, with vegetation cutting activities to be planned and executed by NSP and its contracted service providers.

d) Marine

- NSPML's upward-looking sonar (ULS) at Point Aconi, recovered in May, was re-deployed in July to support water temperature monitoring. Of the two ULS units near Cape Ray—used to measure wave and current conditions—only one was successfully recovered as planned in July. Location of the second unit is planned to be investigated during survey activities later this year.
- Subsea Rock Installation: NSPML submitted its first sustaining capital application to the NSEB in May 2025, with an estimated total project cost of just under \$33 million. Interrogatory Responses (IRs) from interveners were received, and NSPML filed its responses on July 28. A decision from the Board is expected by the end of 2025.
- A localized inspection survey of the rock berms in vicinity of Point Aconi and Cape Ray is scheduled for later in 2025. The results will inform and refine the estimated rock tonnage requirements of the above-mentioned project.

e) Active Power Availability as end of June 2025

- Monopole – 100.00%
- Pole 1 - 99.95%
- Pole 2 - 99.24%
- Bipole - 99.19%

f) Forced Outages:

- Pole 1 reactor hall emergency exit door limit switch was triggered, resulting in a pole trip. Although the door was closed and latched, it had buckled due to exposure to intense sunlight. Pole 1 was deblocked after the limit switch was readjusted. A permanent corrective solution is pending.

g) HVDC Special Initiatives:

- Bottom Brook SPS- hardware has been installed. Commissioning was scheduled for July 31st.

5. IE COMMENTS

All sites are fully operational and in good order. Planned maintenance activities have been completed, with no reported safety or environmental issues. The 2025 Maintenance Plan is active, and maintenance outages have been scheduled. Spare parts inventory is securely maintained in the facility adjacent to the switchyard.

Minor corrective maintenance tasks have either been completed or are currently in the planning stages, and several special initiatives are underway. HVDC forced outages are being analyzed, with anomalies identified and corrected. Overall system performance remains on target, with monopole availability at 100.00% and bi-pole availability at 99.19%.

As previously indicated, for inspection of TL tower components near ground level, targeted vegetation clearance is necessary at designated locations to enable unobstructed drone-based inspections. Similar management is advised along roadside drainage channels to mitigate damming and reduce the risk of washouts during high-intensity rainfall events.

The issue of corroded ground wires observed in the transition compound and at several tower locations requires further investigation and follow-up.

MARITIME LINK: 2024 ANNUAL O&M REPORT

Prepared for: Natural Resources Canada and EMERA

IE Team Lead: Nik Argirov

Date: July 16, 2025

Quality Assurance Statement

Office Address	803-633 Kinghome Mews, Vancouver, BC V6Z 3H3
Prepared by	Nik Argirov, Vlad Kahle and Hamdy Khalil
Reviewed by	Nik Argirov
Approved for Issue by	Nik Argirov

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1. GENERAL

Contractor: Argirov Engineering Inc.

Company: NSP Maritime Link (EMERA)

Annual Report Purpose:

Contractor is tasked to confirm that the budgeting and maintenance of the Maritime Link Project is being conducted in accordance with Good Utility Practice.

Limitations and Exclusions:

For purposes of this Report the Contractor relied on observations made during site visits as well as on the verbal and written information provided by the Company. Actual equipment inspections and the maintenance activities were not witnessed in person. Individual Work Orders and other work records were not reviewed by the Contractor.

2. SCOPE OF THE REPORT

- (a) A summary of any material routine and unscheduled maintenance which has been carried out since the last report as well as an updated review of the expected major maintenance requirements, timing, and milestones
- (b) A breakdown of costs incurred during the year covered by the applicable annual report with respect to operations and maintenance (O&M) including any variance from annual O&M budgets and a summary of any updates of O&M budgets
- (c) A summary of any staffing, training, or labor management issues
- (d) A list of changes to key personnel and the qualifications of new key personnel if any
- (e) Commentary on parts inventory and redundancy
- (f) A review of construction contractors' support and the ongoing management of post-completion technical risks
- (g) Ongoing compliance with major permits, and
- (h) A review of the state of repair of key equipment and facilities

3. REFERENCES

- [1] Maritime Link IE 2024 Year End Review FINAL dated 2025-05-20
- [2] Maritime Link Operations Annual Maintenance Plan - 2024 Doc. No. D-oooED-0-950-03-060 dated 31/8/2023
- [3] SCHEDULE "J" OPERATING REPORT dated April 30th, 2025
- [4] Maritime Link Operations 2024 Q1 Operations & Maintenance Report dated 2024- 04- 15, Doc. No. D-oooED-0-950-05-063
- [5] Maritime Link Operations 2024 Q2 Operations & Maintenance Report dated 2024- 08- 01, Doc. No. D-oooED-0-950-05-064
- [6] Maritime Link Operations 2024 Q3 Operations & Maintenance Report dated 2025- 01- 27, Doc. No. D-oooED-0-950-05-065
- [7] Maritime Link Operations 2024 Q4 Operations & Maintenance Report dated 2025- 06- 23, Doc. No. D-oooED-0-950-05-066
- [8] Schedule "R" ML Compliance certificate dated April 30th, 2025
- [9] NSP MARITIME LINK INC, Consolidated Financial Statements December 31, 2024, by EY, dated March 27,2025

4. 2024 RECAP

4.1 Introduction

The Maritime Link is owned and operated by NSP Maritime Link Inc. (NSPML), a wholly owned subsidiary of EMERA Newfoundland & Labrador (ENL) Holdings Incorporated.

Commercial operation of the Maritime Link commenced on January 15, 2018. Resource development and competency training for Operations staff is ongoing.

Emera and NSPML staff are liaising with Nalcor/ Newfoundland & Labrador Hydro for the purpose of LIL HVDC commissioning and integration tests.

Objective of the IE review and of this Report is to ascertain that assets are maintained in accordance with Good Utility Practice.

4.2 Safety

Key accomplishments in 2024 include:

- Total ENL exposure hours for staff and contractor were 58,645. Strong safety and environmental performance continued in 2024 with no Significant Injury or Fatality (SIF), lost time safety incidents or significant or moderate environmental incidents since entering operations in 2018.
- HVDC maintenance outages were safely executed
- Overhead transmission line inspection program was 100% completed using drones, LiDAR and helicopters.
- New Emergency Response Policy was introduced and finalized for ENL.
- A new vendor was selected for PPE.

4.3 Environment

Highlights:

- ENL was compliant with all environmental permits and regulations in 2024.
- NL completed an audit in 2024 that found 6 non urgent findings, several of which were closed out before the year end.
- Marine environmental effects monitoring program (EEMP) final phase (crab and lobster study) is under way.
- There were no moderate or significant environmental releases in 2024. All other EMS Objectives and Targets were achieved.

4.4 Performance

Availability and Reliability:

- There was one forced bi-pole outage in 2024 resulting in 2 hours of forced unavailability (FEU).
- Energy availability during the period was 97.10%, monopole availability was 99.99%. Record energy transfer of 291.3 GWh occurred in December.

CIGRE Performance Metrics:

	Q1	Q2	Q3	Q4
%FEU	0.0%	0.01%	0.01%	0.01%
%SEU	0.0%	0.30%	2.84%	2.89%
%EA	100.00%	99.69%	97.16%	97.10%
BFO	0	1	1	1

Legend:

FEU : Forced Energy Unavailability
SEU : Scheduled Energy Unavailability
EA : Energy Availability
BFO : Bi- pole Forced Outage

Maritime Link 2024 Active Power Availability:

Monopole: 99.99%
Pole 1: 96.97% (3.0% were planned outages, 0.0% forced outages)
Pole 2: 97.23% (2.8% were planned outages, 0.01% forced outages)
Bi- pole: 94.22%

2024 Forced Outages and Remedial Actions:

- On May 22, 2024, Pole 1 was offline for opportunistic warranty work as NLH transfers were not scheduled. Bi- pole outage occurred during 'Neutral Isolate' switching sequence that was required to isolate Pole 1. Pole 2 was restored after 2 hours. The trip was attributed to switching sequence logic timing algorithm that initiated protection trip to both Poles. Software change was implemented and tested on May 27, 2024.

4.5 Maintenance Activities

Summary

Within the framework of ENL maintenance program over 1805 planned maintenance (PM) activities were completed on the HVDC system and over 2600 Transmission Line inspections were carried out. Key activities in 2024 included:

- The annual HVDC System shutdown took place in September 2024.
- All overhead transmission inspections and subsea inspection activities were completed as planned.
- All planned and critical corrective maintenance activities were completed at Woodbine, Bottom Brook and Granite Canal AC Substations, including 100% of the Winter Readiness and Critical Maintenance Audit Plan items.

HVDC Converter Stations

1805 Preventative Maintenance activities were completed. All tasks under the 2024 Winter Readiness and Critical Maintenance program were completed.

Electrode line inspections were completed by drone. Hands on inspection is scheduled for 2025.

HVAC Substations and Associated Equipment

- All planned and critical corrective maintenance work was completed according to NSP/ NLH maintenance plan at Woodbine, Bottom Brook and Granite Canal.
- The Special Protection System (SPS) hardware was installed at Bottom Brook station. Discussions are being held regarding the final testing and commissioning.

Overhead Transmission and Grounding Lines

- Spring helicopter inspection program for 2024 has been completed
- NS HVDC and Grounding Line drone inspections were completed.
- NL HVDC and Grounding Line drone inspections were completed.
- LiDAR and aerial photographs of ROWs were completed.
- Number of minor corrections were completed on HVDC lines in NS and NL and TL269 (NL).
- In total, 2608 towers were inspected across all ENL lines by drone:
 - 163 HVDC towers in NS
 - 481 HVDC towers in NL
 - 1092 grounding line towers
 - 872 towers on TL269

The quality of the images was excellent. Findings were ranked by relative risk and scheduled for corrections.

Marine

NSPML continued their marine environmental monitoring program:

- For the 6th consecutive year, no sea ice was observed at Point Aconi (2023/ 2024 winter season).
- Summer water temperature monitoring program continued at Point Aconi for its third year.
- During the 2024/ 2025 winter season two of NSPML's three upward looking sonars (ULS) were deployed in Cape Ray to capture ocean data, such as wave heights and current direction as well as velocity.
- The third ULS remains deployed at Point Aconi for sea ice monitoring.
- Full length inspection survey of subsea cables was completed in 2024. Small changes in the level of cable protection were noted.
- NSPML maintained its engagement with DFO and harvesters regarding the shared responsibility for ensuring safety of the ML submarine cables.

Procurement activities

- Converter Stations
 - Long Term Service Agreement was renegotiated with Hitachi Energy for a 3-year term.
 - IGBT spares Order (Hitachi Energy)
 - High Voltage Equipment Technical contract with Cahill Technical Services.

- Submarine Cables
 - Submarine Cable Survey was completed by Horizon/ Seaforth Geosurveys
- Transmission Line Service
 - Long Term Transmission Line Maintenance Agreement with Connect Atlantic Utility Services (CAUS) was amended to include drone services
 - As part of the Vegetation Management program, LiDAR data collection was contracted with Nova Scotia Community College (NSCC)

4.6 Claims

Schedule J: Active claims related to transmission line warranty work are being pursued through commercial warranty mechanisms. Discussions are ongoing.

4.7 HVDC Special Initiatives

- Bottom Brook SPS: NSPML and NLH are engaged regarding the timing and scope of the commissioning tests.
- Data Diode: Development is in progress. The objective of this feature is to enhance operational visibility such as display of operating data and equipment status.
- NS Short Circuit Study: Completed. Study established minimum short circuit levels for reliable operation of the ML.

4.8 2025 Planned Maintenance Outages

Annual Planned Maintenance *Outage Scope*:

- IGBT inspections and replacement
- Annual transformer maintenance
- Fire Protection testing/ maintenance
- Valve cooling maintenance
- Valve cooling pump motor replacement
- Main circuit equipment maintenance (breakers, bushings, reactors, etc.)
- Grounding line equipment (switches, reactors, capacitors, ELIS)

5. O&M BUDGET

Breakdown of forecasted O&M Costs \$M	2024 O & M Budget	2024 Costs to Dec. 31st	2025 Budget
Labour	5.3	4.7	5.3
General Administration	2.3	2.4	2.7
Maintenance	8.5	6.9	6.7
Other	0.6	0.6	0.2
Environmental/Independent Engineer	0.5	0.4	0.4
Insurance	4.6	4.2	4.6
Legal, regulatory & compliance	1.7	1.3	1.6
Contingency	0	0	0
Total O&M Budget	23.5	20.5	21.5

Narrative: Labor variance is due to allocations and vacancies, maintenance variance is due to de-scoping and contingencies, lower insurance is the result of lower premiums, and some legal/ compliance/ regulatory work was deferred to 2025.

6. ENL ORGANIZATION REVIEW

Main organizational changes in 2024 were:

- The most notable development is the departure of [REDACTED] from the NSPML team over to NS Power, accompanied by a comprehensive restructuring of the Asset Management and Engineering division. [REDACTED] will continue to offer support on an as-needed basis. [REDACTED] has been appointed Manager of Asset Operations and Maintenance, and [REDACTED] now holds the position of Sr. Manager of Engineering. Both individuals report directly to the Sr. Director of Operations, [REDACTED].

7. CONCLUDING REMARKS

Robust maintenance management plans are currently in place. The program comprises a comprehensive long-term asset management strategy, supported by an equipment inventory, documented maintenance procedures, and an integrated work order system. In addition, the CIGRE reporting protocol for HVDC performance is in place. All required overhead transmission and grounding repairs have been completed.

At present, scheduled maintenance activities are conducted in accordance with Original Equipment Manufacturer (OEM) manuals and recommendations. Service Level Agreements (SLAs) with various consultants and contractors are in place and evolve as appropriate/needed. This methodology is considered optimal and aligns with recognized utility industry best practices.

Response to identified deficiencies and equipment failures has been prompt and thorough. Engineering measures have been implemented and are ongoing to mitigate challenges associated with power equipment and transmission line hardware. A comprehensive solution for mitigating HVDC transfer capacity reductions during transmission line outages on the NLH grid connecting to Bottom Brook has been developed. Commissioning of the associated Special Protection System (SPS) is targeted for completion in 2025.