Nova Scotia Utility and Review 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 Q2 2022

June 15, 2022

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Mechanism Report.

| 1 | 1.0 | INTRODUCTION |
|----|-----|---|
| 2 | | |
| 3 | | This is the Q2 2022 Quarterly Report for the Maritime Link as directed by the Utility |
| 4 | | and Review Board (UARB) where the UARB ordered in its Supplemental Decision: |
| 5 | | |
| 6 | | [115]detailed reports must be filed by NSPML on a semi- |
| 7 | | annual basis, on June 15 and December 15 each year. The reports |
| 8 | | shall commence December 15, 2013. Updated status reports must |
| 9 | | be filed quarterly. |
| 10 | | |
| 11 | | As per the UARB's order in its Decision regarding the NSPML's Application for final |
| 12 | | approval of Maritime Link Project Costs and approval of the 2022 cost assessment |
| 13 | | (M10206), NSPML continues its quarterly reporting to the UARB by way of this |
| 14 | | Report, with such ongoing reporting including financial data comparing capital and |
| 15 | | operating expenditures against budgeted amounts, reports on the status of Muskrat |
| 16 | | Falls Generating Station and Labrador Island Link commissioning, outstanding |
| 17 | | contractual, warranty and insurance claims, final close out punch list matters, |
| 18 | | outstanding expropriations, and outstanding operating agreements yet to be finalized. |
| 19 | | |
| 20 | | Given that the benefits to ratepayers prior to the Nova Scotia Block and Nalcor |
| 21 | | market-priced energy are secured by Nova Scotia Power through the Maritime Link, |

Nova Scotia Power continues to report on these in its Quarterly Fuel Adjustment

| 1 | 2.0 | UPDATE OF PROJECT SCHEDULE |
|----|-----|---|
| 2 | | |
| 3 | | The Maritime Link was placed in-service on January 15, 2018. |
| 4 | | |
| 5 | | Detail respecting the status of the Nalcor Project and Muskrat Falls is outlined in |
| 6 | | Section 2.9. |
| 7 | | |
| 8 | 2.1 | Gates and Milestones |
| 9 | | |
| 10 | | On August 6, 2021, NSPML signed an Acceleration Agreement with Nalcor which |
| 11 | | commenced delivery of the NS Block starting August 15, 2021. |
| 12 | | |
| 13 | 2.2 | Safety |
| 14 | | |
| 15 | | Safety is a fundamental core value and integral part of every aspect of NSPML's |
| 16 | | business. |
| 17 | | |
| 18 | | In accordance with its COVID-19 Pandemic response and safe return to normal |
| 19 | | operations, NSPML continues to follow local epidemiology, best available pandemic |
| 20 | | protocols and jurisdictional health guidance. Masking and physical distancing |
| 21 | | requirements have been lifted across the organization with the masking and |
| 22 | | distancing being left up to the decisions and tolerances of each individual. Other |
| 23 | | pandemic requirements such as positive test reporting and close contact reporting |
| 24 | | remain. NSPML continues to be risk-focused in the assessment of all work activities |
| 25 | | ensuring that all high-risk work is reviewed and evaluated both before |
| 26 | | commencement of activities and through post- completion evaluations. |
| 27 | | |
| 28 | | There have been no recordable incidents to date in 2022. |
| 29 | | |
| 30 | 2.3 | Commercial Activities |
| 31 | | |
| 32 | | All key major procurement initiatives are now closed. |

| ments |
|-------|
| |

The majority of land rights are now in place, and NSPML is in the final stages of securing any outstanding rights; moving to expropriation for 54 parcels of land as required where agreement could not be reached, landowners could not be found, or title to a land parcel was imperfect. These easements do not impact the ability of the project to complete contract closeouts or to operate according to plan.

2.3.2 Funding

The final draw against the \$1.3 billion Federal Loan Guarantee was requested in February 2020.

2.3.3 Joint Development Agreements

NSPML continues to work with Nalcor and NS Power to finalize one agreement relating to regulation service which is anticipated to be concluded in 2022. The two remaining agreements are internal matters to Nalcor as they relate to the assignment by Nalcor of these agreements to an affiliate. Nalcor is not contractually required to assign the agreements to an affiliate. The status of these agreements does not impact the ability of the company to operate according to plan. Please refer to Attachment 1 for a listing of the Agreements that remain to be concluded.

2.4 Engineering Activities

During execution of the Project, engineering was captured in three main categories across several Work Breakdown Structures ("WBSs"):

- HVDC Submarine Cable Supply and Installation Completed.
- HVDC Converters and Substations Completed.
- Overland Transmission Completed.

| 1 | 2.5 | Submarine Cables |
|----|-----|---|
| 2 | | |
| 3 | | As mentioned in the Q1 Report, a full survey of the cables was conducted in 2021 with |
| 4 | | no immediate concerns identified over the course of the campaign. Assessment of the |
| 5 | | results by NSPML continues. |
| 6 | | |
| 7 | | Planning for the marine survey campaign in 2022 is in progress with the intent to |
| 8 | | complete the survey in the second half of 2022. |
| 9 | | |
| 10 | | NSPML continues to mature its inspection, maintenance, and repair framework. This |
| 11 | | work includes consideration of a form of Contingency Services Agreement with |
| 12 | | Nexans (the Original Equipment Manufacturer) or other relevant contractors. |
| 13 | | |
| 14 | 2.6 | Converters and Substations |
| 15 | | |
| 16 | | The Converters and Substations have been in service since January 2018 and continue |
| 17 | | to perform well. |
| 18 | | |
| 19 | 2.7 | Transmission Lines |
| 20 | | |
| 21 | | The overhead transmission system continued to perform well into the fifth year of |
| 22 | | operations with no significant reliability or downtime impacts experienced. |
| 23 | | |
| 24 | | The inspection program for 2022 is underway with ground level inspections completed |
| 25 | | for the NL HVDC Line, NL Grounding Line, and the NL HVAC line. Remaining |
| 26 | | inspections for NL and NS lines will occur later in 2022. To date, no major issues have |
| 27 | | been identified in 2022. |
| 28 | | |
| 29 | 2.8 | Independent Engineer |
| 30 | | |
| 31 | | NSPML remains engaged with the Independent Engineer (IE) related to the Operations |
| 32 | | phase of the Maritime Link, as per the Federal Loan Guarantee requirements. |

NSPML

| 1 | | The IE's review of NSPML's 2021 Operations and Maintenance activities is underway |
|----|-----|--|
| 2 | | and will be filed with the UARB once completed. |
| 3 | | |
| 4 | | There have been no site visits by the IE so far in 2022; however, one is planned later |
| 5 | | this June. |
| 6 | | |
| 7 | 2.9 | Status of Nalcor Project and Muskrat Falls |
| 8 | | |
| 9 | | Muskrat Falls Assets |
| 10 | | |
| 11 | | Units 1-4 are all in operation and have been released to the Newfoundland and |
| 12 | | Labrador system Operator for control. Maintenance outages are planned for each of |
| 13 | | the generator units through the 2 nd half of 2022 on a unit by unit basis and expected to |
| 14 | | last about a month each that will include completion of remaining project punch list |
| 15 | | items as well as the internal inspection of the Unit 2 turbine that remains outstanding. |
| 16 | | |
| 17 | | Synchronous Condensers at Soldiers Pond |
| 18 | | |
| 19 | | The synchronous condenser ("SC") 1 bearing has been replaced; re-assembly of the |
| 20 | | unit is ongoing. The cause of the bearing damage is currently unknown. GE Power's |
| 21 | | Root Cause Analysis is pending further test results, which is expected to be finalized |
| 22 | | this month. The results and proposed resolution will be provided to LCP and Hydro |
| 23 | | when complete. GE Power's Return to Service schedule for SC1 is currently July |
| 24 | | 2022. SC2 and SC3 are online. |

NSPML

| 1 | | Labrador Island Link |
|----|------|---|
| 2 | | |
| 3 | | Commissioning activities on the Labrador Island Link continue with GE focused on |
| 4 | | software Factory Acceptance Testing, dynamic commissioning at site, and planned |
| 5 | | 475MW testing on track for potential completion later this month. It is anticipated and |
| 6 | | planned that trial operations will proceed with the LIL operating at this level until |
| 7 | | demand and system load allows for subsequent high-power testing to occur. |
| 8 | | |
| 9 | | NSPML and Newfoundland and Labrador Hydro continue to coordinate testing. |
| 10 | | |
| 11 | 2.10 | Status of Benefits to NS Power Customers |
| 12 | | |
| 13 | | Customer benefits received to date are being reported by NS Power with its Quarterly |
| 14 | | Fuel Adjustment Mechanism Report and otherwise in accordance with the Board's |
| 15 | | directions in Decision M10206. |

| 1 | 3.0 | UPDATED COST SUMMARY |
|----|-----|--|
| 2 | | |
| 3 | | As per Enerco U-31, section 6, the details below outline the DG3 forecasted costs. |
| 4 | | |
| 5 | | Table 2 provides an updated cost summary for the Maritime Link, which includes all |
| 6 | | actual costs incurred as of March 31, 2022 and forecasted total costs to close out the |
| 7 | | Project's construction activities. Both actual and forecasted totals have been updated |
| 8 | | to reflect The Board's decision relating to NSPML's Final Capital Cost Application. |
| 9 | | |
| 10 | | NSPML continues to track and report costs, actual and forecast, consistent with the |
| 11 | | methodologies used in the cost forecast represented in the Maritime Link Project |
| 12 | | Application. Capitalized project costs reported to the end of March 2022 have been |
| 13 | | updated to reflect the Board's decision in relation to unrecoverable costs. Costs |
| 14 | | continue to be recorded in accordance with the Affiliate Code of Conduct. All costs |
| 15 | | provided are in Canadian dollars. |
| 16 | | |
| 17 | | Actual AFUDC has been tracked and recorded monthly up to December 31, 2017 and |
| 18 | | has been adjusted from approximately \$209 million to approximately \$208 million in |
| 19 | | accordance with The Board's decision, and below the \$230 million amount originally |
| 20 | | estimated. |

Table 2 Updated Cost Summary for the Maritime Link Project

| (000's of Canadian Dollars) | Actual Costs | | | | | | | | |
|---|--------------|---------|---------|---------|---------|---------|--------------------------|---------------------------|--|
| Description | 2011-2020 | Q1 2021 | Q2 2021 | Q3 2021 | Q4 2021 | Q1 2022 | Total Project to Date | Estimate to Completion | Total Project Estimate at Completion (A) |
| Forest NII Desirat Management Contr | 104 024 | 000 | CEZ | 050 | (220) | (0.120) | 100.040 | 6 457 | 105 105 |
| Emera NL Project Management Costs | 194,834 | 966 | 657 | 950 | (329) | (8,129) | 188,949 | 6,157 | 195,105 |
| Nalcor Project Support Costs | 16,214 | - | - | - | - | - | 16,214 | 2 | 16,216 |
| Construction and Engineering Initiatives | 1,349,520 | 2,361 | 950 | 78 | 197 | (12) | 1,353,106 | (1,382) | 1,351,724 |
| Environmental Approval | 18,416 | - | - | - | - | - | 18,416 | 1 | 18,417 |
| Submarine and related | 343,449 | - | - | - | - | - | 343,449 | 2 | 343,451 |
| Converters, structures, and other ancillary equipment | 548,481 | 64 | 13 | 2 | 58 | 15 | 548,633 | 1,445 | 550,078 |
| AC and DC Transmission | 439,174 | 2,297 | 937 | 76 | 139 | (27) | 442,596 | (2,830) | 439,766 |
| Grand Total | 1,560,568 | 3,327 | 1,607 | 1,028 | (132) | (8,141) | 1,558,269 | 4,777 | 1,563,045 |

Note: Recovery of costs from third parties relating to transmission warranty claims continue to be advanced and will be reported once finalized.

Total Actual Project Costs at end of Q1 2022 Compared to Previous Forecast

As reflected in Table 2, the total actual project capital costs incurred during Q1 2022 was a net credit of \$8,141,000 primarily relating to the adjustment for unrecoverable costs as outlined in The Board's decision.

4.0 **COST FLOW**

2 3

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As per Enerco U-31, section 2.2, please refer to Table 3 below for the cost flow of the Maritime Link. This cost flow report for the base capital spending is forecast at \$1.563 billion in accordance with the Board's decision relating to NSPML's final capital cost application.

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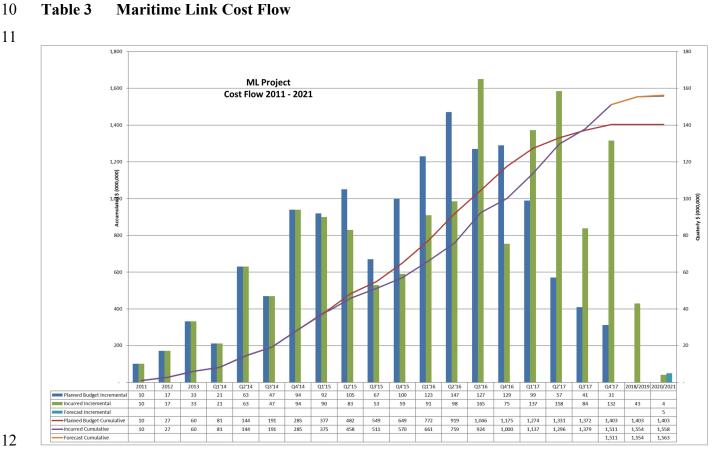
The remaining budget primarily relates to project close-out activities.

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Table 3 **Maritime Link Cost Flow**

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NSPML

| 1 | 5.0 | ASSESSMENT FINANCIAL UPDATE 2022 |
|---|-----|---|
| 2 | | |
| 3 | | NSPML receives monthly cost recovery revenues from NS Power pursuant to the |
| 4 | | Board's order. NSPML anticipates that its 2022 operating and maintenance costs will |
| 5 | | be within the amount approved for the year. |

Operating Agreement Requirements Arising from the Formal Agreements

| | Agreement | Parties | Description | Formal Agreement Source | Status |
|-----|--|---------------------------------|--|-------------------------|--|
| 1. | Asset Interconnection Agreement (NL) | Emera, NLH | Interconnection of ML with the Island Interconnected System | ML-JDA, s. 2.1 (c) | Completed |
| 2. | Multi-Party Pooling Agreement | | | ML-JDA, s. 2.1 (d) | Completed |
| 3. | Transmission Operating Agreement (NL) | Emera, NLH | NLH (SO) to have operational control of ML NL HVdc Facilities | ML-JDA, s. 2.1 (e) | Completed |
| 4. | Asset Interconnection Agreement (NS) | Emera, NSPI | Interconnection of ML with NS bulk electric transmission system | ML-JDA, s. 2.1 (f)(i) | Completed |
| 5. | Transmission Operating Agreement (NS) | Emera, NSPI | NS SO to have general operational control of the ML | ML-JDA, s. 2.1 (f)(ii) | Completed |
| 6. | ECA – Metering and Measuring Standards – Transmission Losses | NSPML, Nalcor | Metering and measuring standards used in the calculation of Transmission Losses | ECA, Schedule 3, s. 5 | Completed |
| 7. | Regulation Service Agreement | NS Power | Nalcor's provision of the Regulation Service with respect to the Nova Scotia Block for the Initial Term | ECA, Schedule 5 | Expect completion in 2022. |
| 8. | Metering and Measuring Standards – NS NTQ transmission losses | NSPML, Nalcor | Metering and measuring standards used in calculation of NS –NTQ Path Peak and Off-Peak Hour transmission losses | NSTUA, Schedule 3, s. 6 | Completed |
| 9. | NB Back-up Capacity Agreement | Bayside Power L.P, Nalcor | Emera's provision of backup Capacity to NB to Nalcor until March 31, 2021 | NBTUA, s. 2.1(d) | No longer required given sale of Bayside to NB Power. |
| 10. | IOA – ML Transmission Procedures | NSPI, NLH | Rules and practices applicable to administration of transmission service over the ML | IOA, Schedule D | Completed |
| 11. | IOA – Reserve Sharing | NSPI, NLH | Sharing of energy and reserves between the Parties to improve Reliability | IOA, Schedule A | Completed |
| 12. | IOA – Description of Interconnection Facilities | NSPI, NLH | Description of Interconnection Facilities for which each Party is responsible | IOA, Schedule B | Completed |
| 13. | IOA – Functional Operating Relationship | NSPI, NLH | Various matters relating to operating relationship | IOA, Schedule C | Completed |

| 14. | IOA – Operating Procedures | NSPI, NLH | IOC to develop "operating procedures" | IOA s.7.2 and s. 7.4(a) | Completed |
|-----|--|---|---|--|--|
| 15. | IOA – Schedule A1.0 NSPI, NLH | | Parties to prepare a plan for NLH participation in Reliability Assessment Program ("RAP") | IOA Schedule A1.0 | Completed |
| 16. | ML TSA – ML Scheduling Process | Emera and Nalcor | Scheduling process applicable to the provision of Firm Point-to-Point Transmission Service | MLTSAs, Schedule 2 | Completed |
| 17. | Amendments to Formal Agreements | Emera, Nalcor | Amendments to Formal Agreements required by Sanction Agreement | Sanction Agreement | Completed |
| 18. | Energy Access Agreement | Emera, Nalcor | Commitments regarding access to market priced energy | Compliance Filing, Appendix A | Completed |
| 19. | Balancing Service Agreement | Emera, Nalcor | Nalcor commitment to provide balancing services from generation sources in NL for 25 years. | Energy Access Agreement Term Sheet, s. 7(g) and Appendix 1 | Completed |
| 20. | Assignment of Transmission Rights under ML(E)TSA | Emera, Nalcor | Assignment of Transmission Rights | ML(E)TSA, s. 3.3 (h) | Completed |
| 21. | Assignment of Energy Access Agreement | Emera, Nalcor, NSPI and Nalcor Energy Marketing (NEM) | Assignment/assumption of Nalcor's rights and obligations to/by NEM | EAA s. 15.1 (a) | At Nalcor's discretion. Not a requirement of NSPML. |
| 22. | Assignment of Nalcor Master Agreement (EAA Schedule 2) | Nalcor, NSPI and NEM | Assignment/assumption of Nalcor's rights and obligations to/by NEM | Nalcor Master Agreement s. 10.5 (a) | At Nalcor's discretion. Not a requirement of NSPML. |
| 23. | JOA-Joint Operating Committee ("JOC") | Nalcor and NSPML | Establish/Operationalize JOC | JOA s. 3.1, 3.5 | Completed |
| 24. | NS Transmission Utilization Agreement | Nalcor and Emera | Status of Emera firm Point to Point Transmission Service | NSTUA s.s.2.2 (a)-(c) | Completed |