



Interrogatories of Commission Staff

TO: Maritime Electric Company, Limited

FROM: Cheryl Bradley, Director of Finance & Regulatory Affairs

DATE: April 21, 2026

RE: 2026 Capital Budget Application

DOCKET: UE20746

The Island Regulatory and Appeals Commission (the “Commission”), in assessing the reasonableness of the 2026 Capital Budget Application (the “Application”) submitted by Maritime Electric Company, Limited (“Maritime Electric” or “MECL”), requests responses to the following interrogatories:

Generation

1. Section 4.1c. – Fuel Offloading Weather Enclosure
 - a. What kind of building is the proposed enclosure?
 - i. Provide a photograph or layout drawing of the proposed location.
 - b. How much has valve and equipment freezing been an issue in the past?
2. Section 4.1d – SCADA Video Wall Display
 - a. Is the whole video wall, complete with support structures, being replaced?
 - i. How many spare monitors are being purchased as part of this outlay?
 - b. What is the expected service life of the proposed LED monitors?
3. Section 4.2b – CT3 Water Treatment Equip Replacement
 - a. What is the expected service life of the existing equipment?
 - b. How long has the existing equipment been obsolete?
 - c. What issues has Maritime Electric experienced with the equipment? What is the total maintenance cost over the past five (5) years?
 - d. If Maritime Electric receives approval for additional generation at the CGS, will this equipment need to be upgraded or expanded?
 - e. Will the operation of CT3 be impacted while this work is completed? If so, what are the expected system impacts and costs associated with impacted operation of CT3?
4. Section 4.4 – Borden Generating Station – Turbine Generators

- a. Table 5 in Maritime Electric's Supplemental Capital Budget Request for MECL's On-Island Capacity for Security of Supply Project (Docket UE20742) indicates decommissioning of CT1 and CT2 will take place in 2031 and 2033, respectively.
 - i. Provide any updates that Maritime Electric has made to these dates.

5. Section 4.4b – CT1 Power Turbine Nozzle Replacement
 - a. Maritime Electric found cracks in a 2011 inspection. Why did it wait 14 years to undertake a follow up inspection?
 - b. How long is CT1 expected to be out of service while this work is being completed?
 - c. Where will the costs required to replace CT1's ancillary services be reflected?
 - d. What additional significant capital or maintenance costs are expected on CT1 over its remaining life?
 - e. Based on the current and expected future capital and maintenance costs, provide an economic justification to continue investing capital and operating dollars into this asset, as opposed to running this equipment to failure and purchasing the services it provides from third parties.

6. Section 4.4c – CT2 Air Intake Replacement
 - a. Describe past maintenance that has been undertaken on the air intake to extend its life.
 - b. Is the proposed new intake expected to last the rest of the asset's expected operating life?
 - c. What maintenance is expected on the proposed new intake over the remainder of CT2's asset life? What is the estimated cost of this maintenance?
 - d. What additional significant capital or maintenance costs are expected on CT2 over its remaining life?
 - e. Based on the current and expected future capital and maintenance costs, provide an economic justification to continue investing capital and operating dollars into this asset, as opposed to running this equipment to failure and purchasing the services it provides from third parties?

7. Section 4.4d – CT1 and CT2 Computer Hardware and Software Replacement
 - a. At this stage of the CT1 and CT2 asset life:
 - i. Why is the hardware and software being replaced?
 - ii. Why are PLC software upgrades being contemplated?
 - iii. Why is it important to modernize the control systems for these generators? What additional functionality or visibility is Maritime Electric looking to gain at this point?
 - b. Has Maritime Electric attempted to source second-hand PLCs to be used, as needed, if an existing PLC fails? If not, explain why not.
 - c. How does legacy Windows XP and PLC software impact the expected operating functions over the assets' remaining lives?

Distribution

8. Section 5.1b – Replacements Due to Road Alterations

- a. Do customer contributions offset the costs incurred due to road alterations?

9. Section 5.2 – Distribution Transformers

- a. Provide a five year historical summary (2021-2025) of annual transformer purchases, by type (polemount, padmount) and size.
- b. What is the current delivery time for distribution transformers?
- c. Provide an annual breakdown since 2020¹ of distribution transformer deployment by reason for installation – new service, upgraded service, end of life, spill prevention, damaged, other. What are expected installations in 2026 based on these categories?
- d. Is Maritime Electric at, above, or below its annual target of replacement of end of life padmount and polemount transformers?
- e. What was the standard size of polemount and padmount transformer prior to governmental incentives for heat pumps and EV chargers?
 - i. How many customers did a standard transformer serve?
 - ii. What is the standard size installed now, and how many customers does it typically serve?
 - iii. What is the relative incremental cost, per unit, for the larger standard transformer(s)?

10. Section 5.3b – Street and Area Lighting

- a. What rate code applies to LED lanterns?
- b. Does the requesting customer pay an upfront contribution towards purchase and operation of LED lanterns, or is the rate set to recover all costs associated with the lanterns?

11. Section 5.4b – Load and Reliability Driven Line Extensions

- a. Which of these projects is driven by:
 - i. Improving reliability through creating alternative feed pathways?
 - ii. Increasing load resulting in facilities approaching or exceeding ratings limits?
- b. How does Maritime Electric quantify the reliability benefits of backup supply paths for customers?
 - i. How does this compare to reliability benefits provided by other proposed projects, such as reclosers and distribution capacitors?
 - ii. How does Maritime Electric prioritize projects and technologies to optimize reliability benefits per dollar invested?
- c. How do the projects proposed in Section 5.4b address the system's worst-performing distribution feeders, as presented in Tables 7 and 8?

12. Section 5.5a – Single Phase and Three Phase Line Rebuilds

- a. What vintages are the three lines proposed for replacement in 2026?
- b. Is the amount of proposed line rebuilds in 2026 at, above, or below Maritime Electric's annual target of replacement of end of life facilities?

¹ DAMP Table 6 (page 83) provides annual summary of distribution polemount transformer replacements 2016-2020.

13. Section 5.5c.ii – Deteriorated Conductor Replacement Program
 - a. What vintage of conductor is being targeted by this program?
 - b. What is the risk of failure of conductors targeted by this program?
 - c. Quantify the impact of the replacement of these conductors on system SAIDI and SAIFI.
 - d. Is any work, aside from conductor replacement, being completed within this program?
 - e. When is the approximate timeframe for a complete rebuild of feeders WL02012 and BL64007?

14. Section 5.5c.iii – Backlot Feed Relocation Program
 - a. What is the expected remaining asset life for OL00930 and KN80437?
 - b. Explain why these assets should be pre-emptively replaced, as opposed to replacing when they reach end of asset life.
 - c. What happens to easements or rights of way when the backlot feeds are removed?
 - d. What is a typical per kilometer and per span construction cost for new distribution facilities?
 - e. Provide a list or map of all remaining backlot feeds in the system that Maritime Electric intends to pre-emptively replace under this program.
 - f. Quantify the impact of removal of these backlot feeders on system SAIDI.

15. Section 5.5d – Distribution Corridor Widening
 - a. What total length of distribution lines is potentially subject to corridor widening?
 - b. What total length of corridor widening is proposed in 2026?
 - c. What is the current cycle of vegetation management? Is this sufficient to keep up with vegetation growth that may encroach on Maritime Electric facilities?

16. Section 5.6e – Satellite-Based Vegetation Imaging – Distribution
 - a. Page 99, Line 6 states that a full system analysis was performed in 2025.
 - i. Why is 20 per cent of the system to be analyzed annually on a go forward basis?
 - b. The cost to perform an analysis of 20 per cent of the system is 35 per cent of the cost to perform an entire system analysis. Over a five-year span, the annual partial system analysis costs more than a full system analysis every five years.
 - i. How will an annual partial system analysis provide more accurate vegetation information than a full system analysis every five years?
 - ii. Will this frequency of system analysis lead to more targeted, site-specific vegetation control activities? If so, will this lead to a more complicated and expensive vegetation management program in the future?

17. Section 5.7 – Distribution Equipment
 - a. When does Maritime Electric expect to have sufficient data gathered from the AMI project to undertake data analysis to assist in prioritizing projects?

- b. Table 50. Sections g and h were not listed in the corresponding table in the 2025 Capital Budget. In what sections of the 2025 Capital Budget was this equipment included?
18. Section 5.7a – Substation, Line and Communication Equipment
- a. Page 105, Lines 8-20. Does this commentary pertain to Section 5.7a, or all of Section 5.7?
 - i. If this commentary pertains to Section 5.7a only, refer to page 105, lines 8-10: “This budget item provides for these annual expenditures, as well as other costs associated with adding new feeders to substations, and adding equipment such as capacitor banks and reclosers to heavily loaded feeders.” Is Section 5.7a for replacement equipment only, or are items purchased under this section for new projects?
 - 1. If the latter, how much of the budget is for new capacitor banks and reclosers?
 - 2. How does the equipment dealing with new substation feeders in Crossroads and Kensington (page 105, lines 12-15) differ from the costs included in Section 5.7h?
 - b. Page 106, Lines 6-8. “The approximately \$3 million increase in budget for 2026, relative to prior years, is due primarily to the aforementioned load-growth driven requirement for substation equipment to connect new feeders, capacitor banks and reclosers.”
 - i. Does this refer to all of Section 5.7, or Section 5.7a only? If the latter, where is this \$3 million located in the budget, compared to 2025?
19. Section 5.7b – Relay Replacement Equipment
- a. When are all the electromechanical relays left in the system expected to be replaced?
 - b. What is the expected life of microprocessor-based relays?
 - i. When will the system’s microprocessor-based relays start requiring replacement?
20. Section 5.7f. – Charlottetown Grid Modernization
- a. What communication path(s) will be used to connect with the field devices?
 - i. Are these paths owned by Maritime Electric or by a third-party?
 - b. How will this system be monitored and controlled in real time?
 - i. Who will have real-time visibility?
 - ii. Who will make real-time control decisions?
 - c. Will there be any duplication in effort or information between the AMI system and this proposed system?
21. Section 5.7g – High Load Readiness Equipment
- a. How was the figure of 19 MVAR of distribution-connected capacitance derived?
 - b. How does the 19 MVAR of distribution-connected capacitance align with transmission system reactive power and facility addition plans?
 - c. Confirm if all reclosers and capacitors added will have communication ability with the System Operator.

- d. What visibility will the System Operator and/or Engineering group have of equipment operations?
- e. What kind of control program will be used to optimize the use of reclosers during outage restoration?

22. Section 5.8 – Transportation Equipment

- a. Are the figures in Table 64 a result of Maritime Electric operational experience or industry guidelines?

23. Section 5.8a – Line Operation Vehicles

- a. Page 120, Line 7. “The three new line operations vehicles that were approved in the 2025 Capital Budget ...”. Confirm that one new line operation vehicle, not three, was approved in the 2025 Capital Budget.
- b. Provide a graphic showing age of existing line operation vehicles, and number of projected annual replacements, by year, over the next five years.

24. Section 5.8b – Small Vehicles and Mobile Equipment

- a. Where does the criteria of seven years or 200,000km originate?

Transmission

25. Section 6.1a – Lorne Valley Switching Station Expansion

- a. Provide layout and single line diagrams for the final substation configuration.

26. Section 6.1b – Sherbrooke X1 Autotransformer Replacement

- a. Provide pre-project and final layout and single line diagram for Sherbrooke substation.

27. Section 6.1c – West Royalty Substation 13.8 kV Distribution Replacements

- a. Provide pre- and post-project layout and single line diagrams for all voltage levels at West Royalty substation.
- b. Describe how the project contributes to Maritime Electric meeting expected future load growth, both in Charlottetown and surrounding areas.

28. Section 6.1d – Scotchfort Substation

- a. Provide existing and future central and eastern PEI transmission system single line diagrams, after the Scotchfort substation project is complete.
- b. Provide diagrams showing those sections of transmission that will be updated and/or rebuilt within the context of this Capital Budget.
- c. Provide Scotchfort layout and single line diagram for the completed project.
 - i. Describe what provisions have been included for future expansion of the Scotchfort substation.

29. Section 6.1e – West Royalty X6 Autotransformer Replacement

- a. This transformer has just reached 40 years old. The 2020 Integrated System Plan (Section 8.3.4) suggests major substation equipment has an expected 40-60 year lifespan. Explain why this transformer requires replacement at this time.

- b. What is being done with this asset once it has been decommissioned?
- c. A 138 kV circuit breaker is being added to the high voltage side of the proposed transformer.
- d. Confirm if this has always been a design standard on the transmission system. If not:
 - i. What is the expected reliability impact of adding this circuit breaker?
 - ii. What is its expected impact on operational flexibility?
 - iii. At what load ranges can it expect to reduce system impacts of a transformer failure?
 - iv. What is the expected rate of transformer failure? How often during its life is this circuit breaker projected to operate to isolate the transformer in a forced outage situation?
- e. Provide a summary of the proposed 2028 West Royalty transmission modifications, with appropriate diagrams if applicable.

30. Section 6.1f – Bedeque Substation

- a. Explain Maritime Electric's long-term plan to supply customer load in the area south of Summerside and Kensington.
 - i. How would future closure of the Borden Generating Station impact local area supply?
- b. What is the ultimate load-serving capability of the Bedeque distribution substation?
 - i. How many transformers and circuit breakers will the ultimate layout accommodate?
- c. How will customers supplied from the Bedeque substation be protected from significant switching voltages when Interconnection submarine cables and/or reactors are switched in and out?
- d. Page 139, Lines 7-8. "The area directly south of the City of Summerside that is supplied by the Albany substation is prone to outages due to the extended distance from the substation." How do SAIDI and SAIFI for the customers in this area compare to system average? To the worst-performing system feeders?
- e. Page 14, Lines 4-13. "Maritime Electric must prepare the substation to accommodate these installations ... to accommodate the integration and operation of the reactors within the existing system." Who is responsible for the costs associated with preparing the Bedeque substation to accommodate the new reactor installations?

31. Section 6.1g - Mount Pleasant Substation

- a. Page 144, Lines 8-9. What power quality issues are being experienced that drive the need for this transformer and substation?
 - i. Will the Woodstock substation resolve the voltage issues currently being experienced by the Eilerslie and Lennox Island customers? Explain.
- b. How much of this project is dedicated for Maritime Electric's proposed solar facility, as filed under Docket UE20743?
 - i. If the proposed solar facility connects to this substation, what are the costs associated with making changes or taking outages at this substation to facilitate the connection?

- c. Provide the ultimate size and layout of the substation, both with and without the proposed solar facility.
32. Section 6.1h – Power Transformers
- a. Provide the ultimate station layout for Clyde River.
 - b. This Application recommends a second transformer at Clyde River, within six years of initial substation commissioning. Does Maritime Electric foresee the proposed two transformers reaching their maximum load servicing capacity? If so, when?
 - c. What is the current delivery lead time for a power transformer?
33. Section 6.1i – Substation Oil Containment Program
- a. Appendix B, Section 6.1 contains a future expenditure on a “25kV Eastern Substation”.
 - i. Confirm this refers to separating the 25kV and 12.5kV at Victoria Cross substation.
 - ii. Will any rework be required on the oil containment system installed at Victoria Cross substation if Victoria Cross is rebuilt or reconfigured in the future?
34. Section 6.1j-i – Backup Generator System
- a. How long are substation batteries designed to last during a power outage?
 - b. Provide a list of substations that do not have backup generator capabilities.
 - i. Is it Maritime Electric’s intention to have backup generation at each substation? If so, how long does Maritime Electric expect all these installations to take?
 - ii. Is a delay in adding this generation to substations a reliability risk? How does this risk compare to other reliability risks facing Maritime Electric?
35. Section 6.1j-ii – Security Upgrades
- a. Provide a breakdown of estimated costs, including material, and internal and external labour costs.
36. Section 6.1j-iii – Equipment Upgrades
- a. What are the target substations for these reclosers?
 - b. Quantify the impact of these reclosers on system SAIDI.
 - c. How do the reclosers proposed in this section differ from those proposed in Section 5.7g?
37. Section 6.1j-iv – Substation Perimeter Hardening
- a. In how many substations does Maritime Electric intend to add these measures?
 - b. Where else have these measures been deployed in the Maritimes area?
38. Section 6.1k – Communication Fibre – Y-106 Scotchfort to Lorne Valley
- a. What vintage is the 7 GHz radio link?
 - i. What is the expected asset life of this radio system?
 - b. Is there any immediate plan to connect distribution assets to this fibre?

- c. Is this fibre being connected to the new Y-106 poles?
 - i. If so, what make-ready conversions are required?
- 39. Section 6.2l – Fibre Modifications Due to Road Alterations
 - a. Does the Government provide a customer contribution to cover these costs? Explain.
- 40. Section 6.2a – 69 kV and 138 kV Switch Program
 - a. What is the long-term plan for the Borden substation?
 - i. Are these switches capable of being redeployed in other areas of the system in the event that the Borden substation is decommissioned?
- 41. Section 6.2b – Transmission Line Refurbishment
 - a. Lines 6-8, page 162. “The budget increase relative to the prior year is necessary to complete transmission line storm handling at strategic locations identified during inspection...”. Define ‘transmission line storm handling’.
 - b. The 70 per cent step increase between 2025 and 2026 is expected to remain in place for the 2026-2030 period, per Appendix B, Section 6.2.
 - i. What incremental transmission line refurbishment activities are planned for the 2027-2030 period, as compared to the 2021-2025 period, that would support this 70 per cent step remaining in place?
- 42. Section 6.2c – Transmission Lines
 - a. Provide layout diagram(s) of transmission system, that clearly identifies:
 - i. Staged additions
 - ii. Long-term (ultimate) transmission system
 - iii. Locations where double-circuit structures are located or proposed.
- 43. Section 6.2d – Transmission Corridor Widening
 - a. How much of the 2026 cost presented in Table 97 is attributable to line Y-115?
 - i. Does this represent Transmission Corridor Widening for the entire length of Y-115 between Woodstock and Sherbrooke? If not, what is the estimated cost to provide Transmission Corridor Widening on the entire length of line Y-115 between Woodstock and Sherbrooke?

Corporate

- 44. Section 7.1a – Corporate Services
 - a. Page 171, lines 25-27 “As the projects under this budget category are unplanned and identified on an as required basis, cost projections at the item level cannot be determined in advance and, therefore, the proposed budget allocation is provisional.” Provide a list of significant projects known to be of high priority in 2026.
- 45. Section 7.1b – Operations Training Centre
 - a. Has this project been identified in any previous Maritime Electric reports or forecasts?

- b. Explain how it is more effective to provide training at this Training Centre than at an approved training centre at an offsite location from the perspective of:
 - i. Content, timeliness and effectiveness of training
 - ii. Overall cost, including forecast annual operational, capital and maintenance costs?

- 46. Section 7.2a – Hardware Acquisitions
 - a. How many substations does the \$340,000 target?

- 47. Section 7.2b – Purchased Software and Upgrades
 - a. Is the PSSE Load Flow subscription an annual fee?

- 48. Section 7.2c – Cybersecurity Enhancements
 - a. Provide an expanded breakdown of Confidential Appendix Q-17, Section 7.2c, Table 4. Delineate how much of each line item is attributed to IT, and how much is attributed to OT.
 - b. Explain how the invoice included as Confidential Appendix Q-17, page 87 fits into this project.

- 49. Section 7.2e – Grid Monitoring and Analysis System
 - a. Page 185, Lines 15-17. The information will “... provide operators and engineers with sub-second electrical system data, automated detection of electrical system events, and advanced analytics.”
 - i. How will this information be used to enhance system operations?
 - b. Page 185, Lines 23-24. “It will then be expanded into other areas of the province using existing communication networks.”
 - i. Does Maritime Electric foresee this monitoring and analysis equipment installed system-wide? If so, provide an estimated timeline and level of effort to complete.
 - c. Is the data measured and transmitted by existing equipment, or does this require new equipment to be strategically located in the field? A simplified process diagram would be beneficial.
 - d. If field hardware and communications are required, what does the ultimate system envisioned look like?
 - e. Does this target utility-scale renewable resources? If so, why is this a utility cost and not paid for by the renewable energy proponent(s) as a necessary grid tool for connection?

Other

- 50. Appendix B
 - a. Section 5.5 – Line Rebuilds
 - i. Do the line rebuilds forecast over the 2027-2030 period meet Maritime Electric’s annual target of replacement of end of life facilities?
 - b. Section 10.0 – Contributions in Aid of Construction
 - i. Provide a high-level estimate of contributions, by document section.

51. Appendix J

- a. Page 10. "... has experienced an estimated peak load of 182 amps, which is above the 100-amp designed maximum loading for single phase lines. Single phase lines operating above 100 amps typically experience power quality issues." Appendix K contains the "Green Road Line Rebuild" project, where a single phase line is being replaced with single phase 2/0 Quail conductor rated for 270 amps. This is in excess of the 100 amp threshold. What is the justification to install a conductor of this size in a single phase situation?
 - i. Do all single phase conductors loaded in excess of 100 amps need to be replaced with three phase conductors? Explain.
 - ii. How many single phase distribution lines with loads in excess of 100 amps are forecast to require replacement in the next five years?
 - iii. Is conversion to three phase the only solution for resolving high single phase loading? If not, what are other potential solutions?

52. Appendix K

- a. Page 11 – "The aspects of these upgrades that provide benefit to Maritime Electric customers only are not factored into the required joint-use conversion contributions."
 - i. What are the "aspects of these upgrades" that would provide benefit to Maritime Electric customers only?
 - ii. If these upgrades are driven by a third-party request, why is the third party not responsible for all costs associated with its project?

53. Appendix N

- a. Page 8, Figure 2. Figure 2 indicates a Y-119 line extension length of 54 kilometers.
 - i. Explain why such an indirect route was chosen to connect Y-119 to Scotchfort substation.
 - ii. Provide an economic case for locating the entire length roadside, compared to a shorter length with offroad locations, taking into account asset lifecycle costs.
 - iii. What are the relative reliability impacts when comparing:
 1. Increased length of line due to roadside construction, and
 2. Decreased length of line due to off-road construction.

Additional interrogatories may follow. Please provide responses to the Commission by May 22, 2026.

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