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Additional Interrogatories of Commission Staff

TO: Maritime Electric Company, Limited

FROM: Cheryl Bradley, Director of Finance & Regulatory Services

DATE: July 10, 2026

RE: On-Island Capacity for Security of Supply Project

DOCKET: UE20742

The Prince Edward Island Regulatory and Appeals Commission (the "Commission"), in assessing the Application by Maritime Electric Company, Limited ("Maritime Electric" or "MECL") for approval of the On-Island Capacity for Security of Supply Project (the "Application"), requests responses to the following interrogatories from Maritime Electric:

Contingency Planning

23. Please explain the contingency or contingencies that justify additional on-Island capacity at this time (i.e. disconnection from mainland, extreme weather events, etc.).

    a. How likely are each of these contingencies to occur?

    b. Have these contingencies previously resulted in a service interruption or load shedding for MECL customers? If so, what was the frequency, duration and impact of the interruption?

24. There has only been one incident of full disconnection from New Brunswick since the second set of cables were installed in 2017.[1] Neither MECL nor its expert, Sargent & Lundy (S&L), has performed any probabilistic analysis of the chance of partial or full disconnection of the import capacity from New Brunswick. However, MECL states that "*the probability of full and partial disconnection events occurring is low*".[2]

    a. Explain why it is appropriate to plan for a contingency that has a low probability of occurring.

    b. How probable should a contingency be for capacity planning purposes?

[1] Capacity Resource Study, page 14 [Exhibit M-1, Appendix C]; MECL Response to Synapse IR-8 [Exhibit M-6, Appendix A]
[2] MECL Response to Synapse IR-10 [Exhibit M-6]

c. Does MECL have a probabilistic analysis of the chance of partial or full disconnection of import capacity from New Brunswick. If so, please provide. If MECL does not have one, please complete such an analysis and file it with the Commission or explain why such an analysis cannot reasonably be completed.

25. In the 2024 Resource Adequacy Report prepared by New Brunswick Power,[3] the utility states that generation reliability criteria are governed by the loss of load expectation (LOLE) metric. As explained by NB Power, LOLE is a probabilistic calculation of the likelihood of experiencing a loss of load event based on a stochastic analysis of the likelihood that available generation capacity is not sufficient to meet the load demand. The Northeast Power Coordinating Council (NPCC) sets a benchmark of a loss of load expectation of no more than 0.1 days per year.

    a. Is the LOLE metric, and the NPCC benchmark of 0.1 days per year, relevant to MECL's application for on-Island capacity?

    b. Is yes, explain how. If not, what is the applicable metric and/or probabilistic analysis?

26. How many times has New Brunswick Power declared an Energy Emergency Alert since 2004? Explain the circumstances, duration, and impact of each Energy Emergency Alert.

27. During the polar vortex in February 2023, Quebec curtailed exports to New Brunswick to zero.[4] How often has this happened since 2004?

28. Over the last several years, Prince Edward Island has experienced a number of extreme weather events, including polar vortexes in February 2023 and January 2026.

    a. Was MECL's connection to the mainland disconnected (partially or fully) during these events?

    b. Was MECL required to shed load or implement rolling blackouts due to a lack capacity from the mainland during these events?

    c. Was MECL required to operate existing on-Island generation to serve its customers during these events?

        i. If yes, for how long and at what cost?

        ii. Was MECL's existing on-Island capacity sufficient to provide uninterrupted service to its customers?

29. Explain the relationship between increased Hold-to-Schedule events and on-Island renewable energy supplies.[5]

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[3] NBEUB Docket EL-002-2025, Renewables Integration and Grid Security (RIGS) Project, Appendix A to the Application [NBEUB Exhibit NBP6.07]
[4] Addendum to the Capacity Resource Study, page 15 [Exhibit M-1, Appendix D]
[5] Application, page 117, lines 13-14 [Exhibit M-1]

Capacity Needs

30. MECL completes a capacity resource adequacy assessment (CRAA) annually.[6] Provide MECL's CRAA from 2015 to the most recent CRAA available.

31. In the Capacity Resource Study, S&L initially recommended a minimum of 85 MW of additional on-Island capacity. However, following the polar vortex in February 2023, S&L recommended that on-Island capacity be increased to 125 to 150 MW.[7] According to MECL, "*Polar vortexes are uncommon and resulted in an abnormally high system peak due to the extreme cold*".[8]

    a. Explain why MECL is relying on an abnormally high system peak caused by an uncommon event for capacity planning purposes.

    b. Is this consistent with industry standards and good utility practice?

32. Historically, Maritime Electric has not used the percentage of peak load to determine the amount of generating capacity that should be installed on-Island.[9] Rather, the availability of surplus generating capacity on the mainland and the import capacity of the Interconnection determined the amount of generating capacity required on-Island.

    a. Explain why MECL has changed the metric for determining on-Island capacity needs.

    b. Explain why the ratio of capacity to peak load is relevant to capacity planning.

    c. Explain why 50 percent of MECL's capacity requirements must be on-Island.

    d. Assume MECL continues to use available surplus generating capacity and import capacity to determine on-Island capacity needs. Using this metric, is additional on-Island capacity required at this time? Please explain and provide supporting calculations and assumptions.

33. Historically, MECL has used the single highest system peak load (1CP) to allocate costs in its Cost Allocation Studies. However, in its most recent 2023 Cost Allocation Study, MECL used 3CP to minimize volatility associated with the extreme weather conditions during the February 2023 polar vortex.[10]

    a. Explain why MECL has averaged the system peak to minimize volatility in its most recent Cost Allocation Study, but relies on the single highest peak for capacity planning purposes.

    b. Is this consistent with industry standards and good utility practice?

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[6] Application, page 44, lines 11-13 [Exhibit M-1]
[7] Addendum to the Capacity Resource Study [Exhibit M-1, Appendix D]
[8] Application, page 39, footnote 56 [Exhibit M-1]
[9] MECL Response to Synapse IR-6 [Exhibit M-6]
[10] Commission Docket UE22503 (Rate Design), specifically Exhibit M-13

34. MECL states that it has recently conducted a thorough review of its system and has determined that during a disconnection the system is not strong enough to support any wind generation.[11]

    a. Provide a copy of this review.

    b. What is meant by MECL's "system"?

    c. Why is the system not strong enough to support any wind generation during a disconnection from the mainland?

Load Forecast

35. Government incentive programs have been a significant factor in growing electrification in Prince Edward Island, specifically for residential space heating. As of 2026, many of the provincial government incentive programs are no longer being offered. What impact does this have on MECL's load forecast?

36. In 2024, MECL received approval for its Advance Metering for Sustainable Electrification Project (Docket UE20737). The new customer information system and advanced metering infrastructure, once operational, will allow for time-of-use (TOU) rates. TOU rates can be used to effectively shift electricity usage and reduce peak demand.[12]

    a. When will the CIS and AMI be operational?

    b. Assume TOU rates are approved by the Commission as of the date that the CIS and AMI are operational. Provide the forecast reduction in MECL's peak demand resulting from TOU rates.

37. Provide MECL's updated (2026) load forecast.[13]

NB-PEI Interconnection

38. MECL refers to the "NB-PEI Interconnection" throughout its Application, but does not define the assets and equipment that are included in the interconnection. Please define.

39. Provide the most recent copy of the Interconnection Agreement between MECL and NB Power.

Alternatives to On-Island Capacity

40. In the Capacity Resource Study, S&L assumes that additional on-Island capacity is required, without consideration of other alternatives, such as improvements to the New Brunswick transmission system and Interconnection, and/or the purchase of additional off-Island capacity.

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[11] Application, page 95, footnote 150 [Exhibit M-1]
[12] Exhibit M-24
[13] MECL Response to PEIEC IR-7 [Exhibit M-21]

a. Explain why S&L did not consider off-Island capacity solutions.

41. Historically, purchasing generating capacity from NB Power resulted in cost savings for Maritime Electric customers because off-Island capacity was more economical than building new on-Island capacity resources.[14]

a. Is adding new on-Island generating capacity the least cost option to address MECL's forecast capacity deficit? Provide all supporting calculations and assumptions.

42. Throughout its Application, MECL makes reference to limitations with the New Brunswick transmission system that constrain capacity transfers to PEI. Improvements to the New Brunswick transmission system are imminent, and MECL expects to contribute financially to these improvements.

a. Provide full particulars of the anticipated improvements to the New Brunswick transmission system. Include supporting documentation from New Brunswick Power.

b. What additional improvements to the New Brunswick transmission system are planned for the next 5 to 10 years?

c. What impact will these improvements have on both reliability and transmission capacity to PEI?

43. MECL states that additional on-Island capacity is needed due to transmission constraints in New Brunswick and concerns about potential generating shortages in Atlantic Canada.[15]

At the time that MECL filed its Application in December 2024, NB Power expected to be capacity deficient within 5 years if new capacity was not added.[16] Since the Application was filed, new capacity has been planned for the region, including in New Brunswick and Nova Scotia.

a. Provide particulars of all new capacity that has been added or planned for the Maritime region since the Application was filed in December 2024.

b. Is NB Power still expected to be capacity deficient within 5 years? Providing supporting documents from NB Power.

c. What is the current forecast capacity surplus (or deficit) for the Maritime region?

d. Explain whether the new generation capacity that has been added or planned in the Maritime region since December 2024 changes MECL's assessment of the need, timing, or amount of additional on-Island capacity proposed in this Application. If not, explain why not.

[14] MECL Response to Synapse IR-4 [Exhibit M-6]
[15] Application, page 5, lines 23-26 [Exhibit M-1]
[16] Application, page 20, lines 8-9 [Exhibit M-1]

e. Since the Application was filed, additional wind generation projects have been announced, approved or placed into service in Prince Edward Island. Explain whether the increase in on-Island wind generation changes MECL's assessment of the need, timing, or amount of additional on-Island capacity proposed in this supplemental application. If not, explain why not.

f. Since the Application was filed, the Province of Prince Edward Island has announced plans to develop a utility-scale battery energy storage system. Explain whether this project changes MECL's assessment of the need, timing, or amount of additional on-Island capacity proposed in this Application. If not, explain why not.

44. In 2015, Maritime Electric sought Commission approval to purchase and install a 50 MW combustion turbine.[17] The application was withdrawn to allow MECL to focus on expanding the New Brunswick-PEI Interconnection.[18] Today, the NB-PEI Interconnection remains a limiting factor in transmission capacity to PEI. Although the physical capacity of the four subsea cables is 560 MW, the Interconnection capacity is limited to 300 MW.

a. MECL states that, as of December 2024, it was studying the expansion of the Interconnection.[19] Provide a copy of this study.

b. Is improving the NB-PEI Interconnection to increase transmission capacity above 300 MW an alternative to on-Island generation?

c. What steps has MECL taken to expand the NB-PEI Interconnection prior to filing this Application in December 2024, and since?

45. MECL discusses the pending replacement of Cables 1 and 2, noting that once they reach end of life, they will likely be replaced with cables having a capacity of 180 MW, similar to Cables 3 and 4. The replacement of Cables 1 and 2, together with a fourth transmission line connecting the mainland system to the Cables, will increase the transfer capacity of the Interconnection.[20]

a. Provide particulars of any and all discussions with Government (at any level) about the replacement of Cables 1 and 2.

b. When are Cables 1 and 2 expected to be replaced?

c. Who will pay for the cost of replacing Cables 1 and 2?

d. Assume that Cables 1 and 2 are replaced with 180 MW cables, a fourth transmission line is constructed, and the New Brunswick transmission system upgrades are completed. In this scenario, is additional on-Island capacity required? Explain with supporting evidence and assumptions.

[17] Commission Docket UE20723
[18] Application, page 17, footnote 16 [Exhibit M-1]
[19] Application, page 112, footnote 178 [Exhibit M-1]; MECL Response to PEIEC IR-14 [Exhibit M-21]
[20] Application, page 112, Section 8.1.2 [Exhibit M-1]

46. In 2026, MECL has contracted for 190 MW of firm capacity from NB Power. The existing energy purchase agreement with NB Power is set to expire on December 31, 2026.

    a. What firm capacity is available from NB Power in 2027 and subsequent years? Provide supporting documentation/confirmation from NB Power.

    b. What is the price (or indicative price) of the capacity from NB Power? Provide supporting documentation/confirmation from NB Power.

    c. In the event that MECL can secure additional firm capacity (more than 190 MW) from NB Power, is additional on-Island capacity necessary? Explain.

47. Refer to Table 10 – Capacity Resource Adequacy Assessment, Existing EPA Capacity Projected into the Future.[21] Provide an updated Table 10 based on the current forecast capacity requirements and the current forecast availability of NB Power capacity (firm and short-term) for each year from 2027 to 2035.

48. MECL states that the cost of purchasing additional capacity from off-Island resources is expected to be comparable to the cost of building additional on-Island generating capacity resources.[22]

    a. Provide all evidence and calculations to support this statement. MECL's response must include a detailed side-by-side comparison of the cost to purchase off-Island capacity and the cost to build on-Island capacity resources. The cost analysis must include the cost to build, maintain, operate and finance on-Island capacity resources over their useful life, including generation costs and MECL's forecast rate of return.

    b. Are there additional costs associated with owning a capacity resource, as compared to purchasing off-Island capacity? Please explain.

    c. Is there a financial benefit for MECL to own the capacity resource, as compared to purchasing off-Island capacity? Please explain and provide any supporting calculations.

49. Assume no additional on-Island capacity is approved at this time.

    a. Explain how MECL will secure additional off-Island capacity. What is the estimated cost of that off-Island capacity?

    b. Based on historical load data, how often and for what duration will rotating outages, load shedding, or other service interruptions occur if no additional on-Island capacity is approved at this time? Provide all supporting calculations and assumptions.

50. Assume only 50 MW of additional on-Island capacity is approved at this time.

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[21] Application, page 45 [Exhibit M-1]
[22] Application, page 86, lines 4-7 [Exhibit M-1]

a. Explain how MECL will secure additional off-Island capacity. What is the estimated cost of that off-Island capacity?

b. Based on historical load data, how often and for what duration will rotating outages, load shedding, or other service interruptions occur if 50 MW of additional on-Island capacity is approved at this time? Provide all supporting calculations and assumptions.

Justification for Additional On-Island Capacity

51. According to MECL, its existing on-Island combustion turbines are seldom operated. The existing CTs operated for 123 hours from 2019 to 2023, averaging less than one hour per month.[23] In 2023, MECL's combustion turbines supplied only 0.2 percent of energy needs (2,509 MWh of energy towards the total energy requirement of 1,590,379 MWh). By 2033, MECL forecasts that on-Island generation will increase to 0.8 percent of the company's total energy needs.[24]

a. According to MECL, as of December 2024, the cost of 150 MW of on-Island capacity was anticipated to be $427 million, with the expected accuracy within 30 percent. Provide justification for a capital expenditure of this magnitude for assets that will seldom be used and that currently supply only 0.2 percent of customers' total energy needs.

b. What quantifiable benefit(s) will 150 MW of additional on-Island capacity provide to MECL's customers? Quantify these benefits and provide all supporting calculations and assumptions. For example, if the additional on-Island capacity will result in security of supply, quantify the number, duration, frequency and magnitude of service interruptions with and without the additional on-Island capacity.

Alternative Capacity Resources

52. According to S&L, a battery energy storage system (BESS) can be used to shift load but not to generate electricity. From MECL's perspective, are there reliability risks associated with a BESS as a capacity resource compared to a CT or a reciprocating internal combustion engine (RICE)? Please explain.

53. In its report, Synapse discusses how a BESS can be used to shift load and reduce winter net peaks. In this way, can MECL use a BESS as a resource to minimize, reduce or defer capital expenditures associated with peak demand? Please explain.

54. The estimated cost of a 10MW/40 MWh BESS is $2,670 per kW.[25] The lead time for specific BESS equipment is approximately one year, and 18 months for associated electrical components.[26]

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[23] MECL Response to Synapse IR-3(f) [Exhibit M-6]
[24] Application, page 119, Table 23 [Exhibit M-1]
[25] MECL Response to Synapse IR-12(b) [Exhibit M-6]
[26] Application, page 66, lines 2-9 [Exhibit M-1]; MECL Response to Synapse IR-1(a) [Exhibit M-15]

In comparison, the cost of the ProEnergy CTs is $3,240 to $3,342 per kW,[27] not including the 5.7 percent increase as of April 2026. The lead time for the ProEnergy CTs is approximately 3.5 years.[28]

a. MECL states that the ProEnergy Proposal is the least cost and most timely solution.[29] Please explain how the ProEnergy Proposal is the least cost and most timely solution. Provide all supporting evidence.

55. MECL describes RICEs as being the most cost-effective opportunity to increase on-Island capacity while achieving multiple added benefits, including improved operating efficiencies and the best future fuel flexibility.[30]

a. Despite the lower cost and added benefits, in its Supplemental Application, MECL is no longer proposing any RICEs. Explain why.

b. Provide a side-by-side comparison of a new RICE plant and a refurbished ProEnergy CT. The comparison must include (but should not be limited to) reliability and performance metrics, available fuel sources, applicable warranties, current delivery time, and installed cost (shown as $ per kW). The source of all data must be included.

56. The cost of energy produced by CTs is “high”,[31] and MECL is forecasting that on-Island generation events will increase.[32]

a. Based on current geopolitical and market conditions, what is the estimated cost to produce energy using CTs, and is this the least cost option to generate on-Island capacity?

b. How does the cost of energy produced by CTs compare to the cost of energy produced by a RICE or a BESS?

57. Maritime Electric states that the proposed combustion turbines are expected to operate infrequently as peaking and emergency generation resources.

a. Explain whether there is an annual level of operation (hours or MWH) at which ownership of the proposed combustion turbines would no longer represent the least-cost alternative when compared to purchasing off-island capacity.

b. If such a threshold exists, identify that threshold and provide all supporting calculations and assumptions.

c. If no such analysis has been completed, explain why not.

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[27] Supplemental Application, pages 6, 25 [Exhibit M-12]
[28] Exhibit M-28
[29] Exhibit M-28
[30] Application, page 106, lines 7-12 [Exhibit M-1]
[31] Application, page 103, lines 13-14 [Exhibit M-1]
[32] Application, page 119, Table 23 [Exhibit M1]

Alternative Fuel Sources

58. In its Application, MECL discusses the federal and provincial government goals to reduce GHG gas emissions.[33] MECL goes on to discuss alternate fuel sources with less carbon impact than diesel that can be used with CTs and RICEs. These alternate fuels include biodiesel, natural gas and hydrogen.

    a. According to information contained in the Supplemental Application, the ProEnergy CTs can operate using diesel or natural gas. Please confirm.

    b. Can the ProEnergy CTs operate using liquified natural gas, compressed natural gas, or both?

    c. What, if any, modifications are required to operate the ProEnergy CTs using natural gas (rather than diesel)? What is the cost of these modifications?

59. MECL states that liquified natural gas is not a viable option in PEI,[34] while compressed natural gas (CNG) would require the development of transportation pathways, natural gas supply contracts, and on-Island offloading and storage facilities.[35] S&L states that the cost of developing natural gas infrastructure is "*too great to make economic sense for power plants that will be primarily used as backup generators*".[36]

    a. As natural gas is not currently a viable option in PEI, explain why MECL is proposing to install 100 MW CTs that operate on natural gas as an alternative to diesel.

    b. To date, what has MECL done to develop transportation pathways, natural gas supply contracts, and on-Island offloading and storage facilities?

    c. Calculate the capital and operating costs associated with using natural gas as a fuel source over the useful life of the ProEnergy CTs, including the cost of transportation, storage, and infrastructure development.

60. A 50 MW CT at full output uses approximately 39 to 49 CNG trucks over a 24-hour period.[37] S&L states that the amount of storage space is too large for CNG to be used as a fuel source at MECL's existing power plants.[38]

    a. Does MECL agree with S&L's finding?

    b. If yes, what is MECL's proposed solution, and what is the forecast cost of that solution?

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[33] Application, page 107, lines 2-4 [Exhibit M-1]
[34] Application, page 109, lines 1-8 [Exhibit M-1]
[35] Application, page 108, lines 17-26 [Exhibit M-1]
[36] Capacity Resource Study, page 55, section 4.2.3 [Exhibit M-1, Appendix C]
[37] Application, page 108, lines 19-20 [Exhibit M-1]
[38] Capacity Resource Study, page 55, section 4.2.3 [Exhibit M-1, Appendix C]

61. MECL states that the long-term alternate fuel choice for the proposed on-Island generation should be made in conjunction with the long-term alternate fuel plan and strategy for the province and the region.[39]

    a. What is the long-term alternate fuel plan and strategy for the province and region?

    b. How do the ProEnergy CTs align with this strategy?

    c. What are the forecast stranded costs if future expenditures are required to accommodate alternate fuels? [40]

62. What fuel source will be used by the RIGS Energy Atlantic Project in New Brunswick?

63. Explain the impact that the proposed use of diesel fuel in this Application, rather than the fuel source identified in response to IR 62, is expected to have on the operating cost of the proposed combustion turbines and the resulting cost of electricity supplied to PEI customers. Provide supporting calculations and assumptions.

Government Policy & Regulations

64. How does the ProEnergy Proposal align with the Province's target of net zero emissions by 2040?[41]

65. Since the Application was filed in December 2024, the Federal Government has introduced Clean Electricity Regulations (CER) that aim to create a net-zero electricity grid by 2050.

    a. What impact do the CER have on MECL's proposed 100 MW of diesel-operated CTs?

    b. Is the ProEnergy Proposal consistent with the CER?

    c. Is there a risk that diesel-operated CTs will become stranded assets in the future due to a change in provincial or federal government regulations?

    d. If yes, who bears that risk and any resulting financial implications – MECL or its customers?

66. The ProEnergy Proposal, if approved, requires an Environmental Impact Assessment from the Provincial Government and permit(s) from the City of Charlottetown.[42]

    a. Provide particulars of all permits and government approvals (all levels) required for the ProEnergy Proposal.

    b. Provide the status of each required approval/permit.

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[39] Application, page 110, lines 13-15 [Exhibit M-1]
[40] Application, page 110, lines 15-16 [Exhibit M-1]
[41] Application, page 118, line 2 [Exhibit M-1]
[42] Supplemental Application, page 24, lines 5-13 [Exhibit M-12]

GHG Emissions

67. What are the current applicable emissions standards, and do the ProEnergy CTs comply with these standards? Provide all supporting evidence.

68. Refer to the Application at page 122, Figure 30 – Generation GHG Emissions Forecast Comparison. Update this Figure to show the forecast GHG emissions from the ProEnergy CTs over their useful life. Assume the CTs will operate using diesel.

ProEnergy Proposal

69. What are the sustaining capital expenditures required for the ProEnergy CTs over their useful life?

70. ProEnergy is based in the United States.

    a. Will tariffs apply to the purchase of goods and/or services from ProEnergy?[43]

    b. If yes, how much are the tariffs?

    c. Are the tariffs included in the project costs filed by MECL?

71. In its Capacity Resource Study, S&L describes MECL's three most critical needs to include "*achieving sustainability targets*". These targets include reducing MECL's GHG emissions by 55 percent by 2030 (from 2019 levels).[44] How will the ProEnergy Proposal achieve this target?

72. During the refurbishment process, ProEnergy ensures "*the turbine meets or exceeds current performance and reliability standards*".[45] Provide these performance and reliability standards.

73. The Application as filed was based on a 50 MW General Electric LM6000 PC combustion turbine.[46] In its Supplemental Application, MECL is now proposing a refurbished 100 MW ProEnergy PE6000 combustion turbine.

    a. Provide a side-by-side comparison of a new GE LM6000 combustion turbine and a refurbished ProEnergy PE6000. The comparison must include (but should not be limited to) reliability and performance metrics, available fuel sources, applicable warranties, current delivery time, and installed cost (shown as $ per kW). The source of all data must be included (hyperlinks are acceptable).

74. ProEnergy refurbishes the turbines in Sedalia, Missouri, where each unit undergoes testing "*under real-world conditions*".[47]

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[43] Supplemental Application, page 37, section 7.2 [Exhibit M-12]
[44] Capacity Resource Study, page 19 [Exhibit M-1, Appendix C]
[45] Supplemental Application, page 16, lines 7-9 [Exhibit M-12]
[46] Application, page 47, footnote 68 [Exhibit M-1]
[47] Supplemental Application, page 16, lines 2-3 [Exhibit M-12]

a. What are the conditions under which the turbines are tested, and how are these conditions the same or different from the conditions under which the turbines will operate in Prince Edward Island?

75. The output of CTs varies based on ambient air temperatures.[48] During the polar vortex in February 2023, parts of Prince Edward Island experienced temperatures as low as minus 45ºC.[49]

a. What ProEnergy projects, specifically projects using refurbished PE6000 combustion turbines, have been constructed in climatic conditions comparable to Prince Edward Island?

b. Have the ProEnergy PE6000 combustion turbines successfully operated in climatic conditions comparable to the February 2023 polar vortex? If yes, provide information about the location, dates, duration and performance of the ProEnergy CTs in these conditions.

c. Provide the performance and reliability metrics, including (but not limited to) output, availability, forced outage rate, and cold-start success, for the ProEnergy PE6000 combustion turbines in climates comparable to PEI, and specifically in extreme weather events comparable to the February 2023 polar vortex.

76. In July 2025, MECL provided a "Scope of Supply Summary" specific to the ProEnergy Proposal. According to the July 2025 filing, the Design Air Temperature Range for the ProEnergy equipment is 20ºF (minimum) to 110ºF (maximum).[50]

In April 2026, MECL filed an updated "Scope of Supply Summary" for the ProEnergy Proposal.[51] The April 2026 update states that the Design Air Temperature Range for the ProEnergy equipment is -32ºC (minimum) to 43ºC (maximum).

a. Explain the change in the minimum Design Air Temperature Range.

b. What modifications/changes to the ProEnergy equipment are required to facilitate this change in the design air temperature range?

c. What (if any) impact does the change in design air temperature range have on the cost of the ProEnergy Proposal?

77. The Scope of Supply Summary provided by ProEnergy does not provide the estimated performance for gross power output or gross heat rate for ambient temperatures below minus 1.11ºC.[52]

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[48] Application, page 102, footnote 165 [Exhibit M-1]
[49] See Environment and Natural Resources Canada Hourly Data Report for February 04, 2023, East Point (AUT)
[50] Exhibit M-11, page 9
[51] Exhibit M-28, Exhibit A to the Updated Confidential Appendix D (Slot Reservation Agreement)
[52] Exhibit M-12, Exhibit A to Confidential Appendix D (Slot Reservation Agreement); Exhibit M-28, Exhibit A to the Updated Confidential Appendix D (Slot Reservation Agreement)

a. What are the normal operating conditions for CTs in Prince Edward Island?

b. What is the guaranteed gross power output and guaranteed gross heat rate at normal operating conditions in Prince Edward Island?

c. What is the guaranteed gross power output and guaranteed gross heat rate at the minimum and maximum Design Air Temperature Range (-32°C minimum and 43°C maximum)?

78. The minimum load level of a CT makes it less efficient when small amounts of generation are required. If the generation needed is less than the minimum load level, another source of energy must be reduced to allow the CT to operate. This results in increased operating costs and GHG emissions.[53]

a. What is the minimum load level of the ProEnergy CTs?

b. Refer to the answer in (a) above. How many times in the previous 5 years has the amount of required on-Island generation been less than the minimum load level of the ProEnergy CTs?

c. Estimate the increased operating costs and GHG emissions resulting from the load level of the ProEnergy CTs over their useful life. Provide all assumptions and supporting calculations.

Alignment with New Brunswick RIGS Project

79. In its Supplemental Application, MECL states that a reason for the ProEnergy Proposal is the "*economics of participating in a larger order and the potential for sharing mobilization costs of installation contractors*".[54] As of April 2026, the estimated delivery time for the ProEnergy CTs (October 2029) no longer aligns with the New Brunswick RIGS Project.[55]

a. What impact does this have on the cost of the ProEnergy Proposal, including (but not limited to) the ability of cost and resource sharing with the RIGS Project?

80. According to MECL, ProEnergy typically does not pursue projects smaller than 200 MW.[56] MECL states that if the timeframe does not align with the New Brunswick RIGS Project, the opportunity to share resources and benefit from execution synergies may be lost, and ProEnergy may no longer be willing to proceed with MECL's project under the current terms.[57]

a. MECL's project no longer aligns with the New Brunswick RIGS Project. Provide confirmation from ProEnergy that it will proceed with the MECL project.

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[53] Application, page 57, footnote 89 [Exhibit M-1]
[54] Supplemental Application, page 9, lines 18-20 [Exhibit M-12]
[55] Exhibit M-28
[56] Supplemental Application, page 16, lines 16-18 [Exhibit M-12]
[57] Supplemental Application, page 29, footnote 35 [Exhibit M-12]

81. The total estimated cost of the ProEnergy Proposal includes two distinct components: (1) equipment supply, and (2) Engineering, Procurement and Construction.[58] Although the Engineering, Procurement and Construction services are "*essential to the overall execution of the project*", an Engineering, Procurement and Construction Agreement between MECL and ProEnergy has not yet been developed.[59]

    a. Provide written confirmation from ProEnergy of the cost of the Engineering, Procurement and Construction services for the MECL project.

82. MECL states that the ability to secure Engineering, Procurement and Construction Services is "*directly tied to the timing and alignment with NB Power's Centre Village project*".[60] The timing of the MECL project no longer aligns with the New Brunswick RIGS Project.

    a. Provide written confirmation from ProEnergy that it will provide all necessary Engineering, Procurement and Construction services for the MECL project, if approved.

Financial Implications

83. Refer to page 11 of Appendix E of the Application. Under the heading "Project Cost", there is a line item for Equity Return. The "total" Equity Return is 153,997,000.

    a. What does the Equity Return and the "total" Equity Return represent?

84. The financial analysis filed by MECL to IR-16 is based on a single set of assumptions regarding project cost, operating costs, timing and utilization. Update the Impact on Rate Base, Revenue Requirement and Customer Rates analysis filed in support of the Application assuming each of the following scenarios independently:

    a. Capital costs increase by 10 percent;

    b. Capital costs increase by 20 percent;

    c. The in-service date is delayed by one year;

    d. The in-service date is delayed by two years;

    e. Diesel fuel costs increase by 25 percent; and

85. Maritime Electric states that the proposed combustion turbines are expected to operate infrequently as peaking and emergency generation resources.

    a. Explain whether the Net Present Value analysis and the Impact on Rate Base, Revenue Requirement and Customer Rates analyses filed in response to IR-16 would change if the actual annual operating hours of the proposed combustion turbines differ from those assumed in the Application.

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[58] Supplemental Application, page 17, lines 3-5 [Exhibit M-12]
[59] Supplemental Application, page 18, lines 1-6 [Exhibit M-12]
[60] Supplemental Application, page 34, lines 22-24 [Exhibit M-12]

b. If yes, update the Net Present Value analysis and the Impact on Rate Base, Revenue Requirement and Customer Rates analyses assuming annual operation of:
    i. 50 hours;
    ii. 100 hours;
    iii. 250 hours;
    iv. 500 hours; and
    v. 1,000 hours.

Provide all supporting calculations and assumptions.

86. Maritime Electric states that the primary purpose of the proposed combustion turbines is to improve reliability and security of supply.

a. Quantify the reliability benefits expected to result from the proposed project, including any reduction in:
    i. the probability of rotating outages;
    ii. the frequency of rotating outages;
    iii. the duration of rotating outages;
    iv. expected unserved energy; and
    v. any other reliability metrics relied upon by Maritime Electric in support of this Application.

b. Explain how the reliability benefits identified in part (a) were considered in determining that the proposed project is prudent and represents the least-cost solution.

87. The Net Present Value analysis filed in response to IR-16 includes avoided costs associated with the purchase of off-Island firm capacity.

a. Explain how the avoided off-Island capacity costs were determined.

b. Identify and explain the circumstances that could cause the avoided off-Island capacity costs to differ materially from those assumed in the Application.

c. Explain whether the Net Present Value analysis and the Impact on Rate Base, Revenue Requirement and Customer Rates analyses would change if the avoided off-Island capacity costs differ from those assumed in the Application.

d. If yes, update the analyses assuming the avoided off-Island capacity costs are:

i. 10% lower;
ii. 25% lower; and
iii. 50% lower than assumed in the Application.

88. Does Maritime Electric have corporate performance targets or objectives? If yes, provide the corporate performance targets or objectives applicable from 2024 to the present and explain how they relate to the proposed project, if at all.

89. Does Maritime Electric maintain personal performance targets, corporate performance targets, or incentive plans applicable to employees? If yes, provide the applicable targets, objectives and incentive measures for employees to participate in an incentive compensation plan from 2024 to the present.

90. Will approval or denial of this Application affect the compensation, incentive compensation, bonus, or other financial remuneration of any Maritime Electric employee? If yes explain how the employee's compensation would be affected, quantify the financial impact (if possible), and explain whether such compensation is proposed to be recovered through customer rates.

91. Will approval or denial of this Application affect the financial return or other financial benefit received by Maritime Electric's shareholder? If yes, explain how the shareholder's financial return or benefit would be affected, quantify the financial impact (if possible), and explain whether the financial benefit is proposed to be recovered through customer rates.

The Commission requires responses to these interrogatories no later than 4:00 p.m. on July 24, 2026.

Additional interrogatories may follow.

Cheryl Bradley

Cheryl Bradley, CA, CPA
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Prince Edward Island Regulatory & Appeals Commission