



CANADA

PROVINCE OF PRINCE EDWARD ISLAND

BEFORE THE ISLAND REGULATORY AND APPEALS COMMISSION

Docket UE20742

IN THE MATTER of the Application and Supplemental Application of Maritime Electric Company, Limited for the approval of a Supplemental Capital Budget Request for the On-Island Capacity for Security of Supply Project, pursuant to section 17 of the *Electric Power Act*, RSPEI 1988, c. E-4.

**RESPONSE OF MARITIME ELECTRIC COMPANY, LIMITED
TO PRE-HEARING SUBMISSIONS**

INTRODUCTION

1. Maritime Electric Company, Limited ("Maritime Electric" or the "Company") files this Brief in response to pre-hearing submissions made by the Friends of The Commission. As confirmed by the Commission, the hearing will be limited in scope to a single question: whether Maritime Electric should receive approval to proceed with the Accelerated On-Island Capacity Development Solution — specifically, the acquisition of two 50 megawatt ("MW") PE6000 aeroderivative combustion turbines ("CT") from ProEnergy Services LLC ("ProEnergy") for installation at the Charlottetown Generating Station (the "ProEnergy Opportunity").
2. Maritime Electric respectfully submits that the answer to that question is yes. The ProEnergy Opportunity is the most timely, cost-effective, and technically sound means available to begin closing Prince Edward Island's growing electricity capacity deficit. It should be approved.
3. This Brief sets out Maritime Electric's response in four parts: (1) specific comments on the pre-hearing submissions made by the Friends of the Commission; (2) a discussion on the nature and urgency of the capacity problem; (3) the process by which Maritime Electric identified and pursued the ProEnergy Opportunity; and (4) why that Opportunity should be

approved as the first, foundational step in addressing Maritime Electric's security of supply.

I. THE FRIENDS OF THE COMMISSION SUBMISSIONS DO NOT ALTER THE ANALYSIS

4. Maritime Electric has reviewed the preliminary written submissions filed by Energy Democracy Now! Co-operative Limited ("EDN") on July 31, 2026, and by Peter Bevan-Baker, MLA, in July 2026, both filed in their capacity as Friends of the Commission. Maritime Electric addresses these submissions briefly, because the Commission's task in this proceeding is to resolve a discrete technical and economic question — whether the ProEnergy Opportunity should be approved — and that question has already been thoroughly tested through the exchange of expert evidence between Maritime Electric and the Commission's own retained expert, Synapse Energy Economics, Inc. ("Synapse").

A. Neither Submission Offers Competing Technical or System-Specific Analysis

5. Neither EDN nor Mr. Bevan-Baker has retained a resource adequacy expert or conducted any system-specific modeling of Maritime Electric's electrical system. Mr. Bevan-Baker's submission expressly acknowledges this, stating that he is "not a resource adequacy modeller" and cannot say whether the appropriate effective load carrying capability figure for battery storage on PEI is "forty-three per cent, or sixty, or ninety." EDN's submission similarly offers no independent quantitative analysis of Maritime Electric's system, but instead raises a series of general policy considerations — regional grid integration discussions, demand-side management, and provincial renewable procurement — without modeling their effect on the 115 MW perfect capacity shortfall by 2030, identified in the Maritime Electric Resource Adequacy Study ("E3 Study"), prepared by Energy and Environmental Economics, Inc. ("E3") .
6. The technical question properly before the Commission has been addressed by multiple experts: Synapse, retained by the Commission, and Sargent & Lundy and E3, both retained by Maritime Electric. All agree that PEI requires significant new on-Island capacity. Their disagreement is confined to the relative contribution of battery storage versus firm thermal generation to meeting that need — a question the E3 Study addresses through Maritime Electric-specific probabilistic modeling, not through analogies to other systems or general policy argument.

B. EDN's Objections Are Already Addressed by the E3 Study's Modeling

7. EDN submits that the Company's loss-of-load-expectation analysis is flawed because it does not account for additional on-Island wind and solar generation, demand-side management, and regional grid integration initiatives. This objection mischaracterizes the E3 Study, which already incorporates approximately 200 MW of existing and forecast wind and solar generation by 2030 — more renewable penetration relative to system size than any neighbouring utility — and separately quantifies the limited incremental capacity value that further renewable additions would provide, given the concentration of PEI's reliability risk in low-wind, high-heating-demand winter events. The E3 Study also already incorporates the availability of non-firm imports over the New Brunswick intertie, subject to the same regional constraints EDN references. Non-binding memoranda of understanding to “explore opportunities and strategies” for future regional grid integration do not displace the near-term, quantified capacity shortfall the E3 Study identifies, nor do they provide any firm, dispatchable capacity that Maritime Electric can rely upon to meet the Company's capacity needs by 2030.

C. Mr. Bevan-Baker's Submission Confirms, Rather Than Undermines, the Need Identified by E3

8. Notably, Mr. Bevan-Baker's submission does not dispute the existence or scale of the capacity shortfall. To the contrary, he states that the E3 Study “has made the case for the existence and the scale of that need more convincingly than Maritime Electric had managed in the year and a half preceding it,” and that he accepts that finding. His submission instead raises process concerns — the sequencing of Maritime Electric's deferral account request, the adequacy of the Company's integrated planning documents, confidentiality of certain commercial and compensation-related information, and the vendor and warranty terms associated with the ProEnergy turbines — none of which bears on the narrow question the Commission has confirmed is before it in this hearing: whether the ProEnergy Opportunity should be approved. To the extent Mr. Bevan-Baker's submission raises the comparative effective load carrying capability (“ELCC”) values used by Synapse and E3, that comparison is addressed in the evidence: the E3 Study's PEI-specific modeling, not the Newfoundland-derived or NB Power-derived assumptions referenced in earlier proceedings, is the appropriate basis for evaluating battery storage's contribution to this Island's reliability needs.

D. The Commission Should Focus on the Technical Record

9. Maritime Electric does not question the sincerity of either EDN's or Mr. Bevan-Baker's engagement with this proceeding. However, the Commission's decision on the ProEnergy Opportunity should turn on the substantial technical and economic record built through expert evidence, interrogatory responses, and the Commission's own retained expert analysis — not on submissions that, on their own terms, do not purport to offer competing system-specific modeling. Maritime Electric respectfully submits that the matters raised in the Friends of the Commission submissions, to the extent they bear on the scope of this hearing at all, are fully answered by the record already before the Commission, including the E3 Study, the Portfolio Net Present Value Study ("Portfolio NPV Study") and Maritime Electric's responses to Commission Staff interrogatories filed as Exhibit M-30.

E. Additional Factual Clarifications Regarding the Submissions

10. Maritime Electric also wishes to place several specific factual clarifications on the record in response to statements made in the Friends' submissions.

Confidentiality of Rate Impact Attachments

11. Mr. Bevan-Baker's submission states that the updated estimated impact on customer rates, submitted as IR-84 - Confidential Attachment 1 and IR-87(d) - Confidential Attachment 1 in Maritime Electric's response to additional interrogatories from Commission Staff, "have been sealed in their entirety." Maritime Electric clarifies that these attachments were included in the Company's interrogatory responses and shared with Mr. Bevan-Baker. The only items redacted in the attachments were those approved by the Commission pursuant to Order UE25-07A.

The E3 Study's Recommended Resilience Analysis Is Not a Precondition to Approval

12. Mr. Bevan-Baker's submission notes that the E3 Study models the subsea cables as available 100 per cent of the time and recommends a separate resilience analysis simulating an extended cable outage, and observes that "that has not been done." Maritime Electric clarifies that modelling the subsea cables as available 100 per cent of the time is a conservative assumption in the sense that it minimizes the Island's total capacity requirement; in reality, there is a non-zero probability of a partial or full disconnection, which, if modelled, would increase the total on-Island capacity required.

Mr. Bevan-Baker's submission omits the portion of the same E3 recommendation clarifying that the resilience study "may identify the need for *additional* thermal capacity, relative to the RA [resource adequacy] need determined in this [E3] study." The resilience analysis is therefore not a precondition to the Commission's decision on the Supplemental Filing; it is an analysis to determine whether an incremental amount of thermal (e.g., CT) capacity is required beyond the need already established in the E3 Study.

13. Similarly, Mr. Bevan-Baker's submission characterizes the E3 Study's recommendation that its results be used "to inform least-cost and reliable portfolios in future economic analyses" as showing that "the planning this study is intended to feed has not yet taken place." Maritime Electric clarifies that the "Portfolio NPV Study", submitted as IR-54 - Attachment 1 in the Company's response to additional interrogatories from Commission Staff, is itself a comprehensive economic analysis comparing the cost of the capacity resource portfolios identified in the E3 Study, and that its results demonstrate that portfolios including the ProEnergy Opportunity have the lowest present value cost. These findings are consistent across all sensitivity tests performed.

Testing of the ProEnergy Combustion Turbine Units

14. Mr. Bevan-Baker's submission references Maritime Electric's response to IR-74 from Commission Staff, which corrected earlier information regarding testing of the ProEnergy CT units. Because Maritime Electric is proposing an engineer, procure and construct arrangement for the ProEnergy Opportunity, the CT units are installed at the customer's site location within the project-specific packages, commissioned, and tested on site to demonstrate satisfaction with the contractual performance guarantees at the unique site conditions. Maritime Electric clarifies that this on-Island, PEI-specific testing arrangement, together with performance guarantees for the project and ProEnergy's assumption of associated risk, is superior to testing the units at ProEnergy's facility in Sedalia, Missouri.

Renewable Energy Additions on PEI

15. Mr. Bevan-Baker's submission cites United States Energy Information Administration data that, in the United States, more than 90 per cent of new electricity generating capacity added since 2004 has been solar, wind, and battery storage. Maritime Electric notes that, since 2006, 100 per cent of the energy resources added to Maritime Electric's own system have been solar and wind, and that the E3 Study confirms Maritime Electric has the highest penetration of wind and solar compared to neighbouring regions. Maritime Electric

will continue to rely on existing and new renewable resources to supply energy, but these resources cannot provide the firm capacity required to address the Company's capacity needs - the E3 Study's ELCC results show that incremental wind generation provides limited capacity value (marginal ELCC in the single digits, reflecting Maritime Electric's existing purchases of 120 MW of wind) and that solar generation has very low capacity value because reliability events on PEI are concentrated before sunrise and after sunset during very cold winter days with limited sunlight hours.

System-Specific ELCC Modelling, Not Figures Imported From Other Jurisdictions

16. Mr. Bevan-Baker's submission separately criticizes an earlier legislative committee presentation that compared the ELCC of batteries with combustion turbines using a Newfoundland and Labrador study showing a 100 MW four-hour battery accredited at approximately 32 MW, on the basis that Newfoundland's hydro-dominated system "bears little resemblance" to PEI's, and that importing that figure to PEI without Island-specific modelling was not a sound basis for a \$300 million decision. Maritime Electric agrees that Island-specific modelling is essential, which is precisely what the E3 Study provides: it includes extensive modelling based on Maritime Electric's specific system, using industry best practices and an industry-standard loss of load expectation ("LOLE") metric of 0.1 days per year. By contrast, the Synapse Report contains no ELCC modelling of its own and instead assumes that ELCC results from New Brunswick Power Corporation's ("NB Power") system are directly applicable to Maritime Electric's, notwithstanding that the NB Power system, like Newfoundland's, is approximately ten times larger and has an entirely different generation resource mix.

The Narrowing Cost Gap Reflects Rising CT and Reciprocating Internal Combustion Engine ("RICE") Costs, Not Improved Battery Storage Economics

17. The submissions discuss the financial implications of the Company's proposal for ratepayers. Maritime Electric is cognizant of these impacts and has consistently presented the Commission with least-cost solutions to minimize the impact on customer rates: it submitted the Supplemental Filing promptly upon the emergence of the ProEnergy Opportunity because of its lower cost and more favourable timelines, and the E3 Study and Portfolio NPV Study together demonstrate that the ProEnergy Opportunity is part of the least-cost solution. Maritime Electric further clarifies that, although the economics of battery energy storage systems ("BESS") appear to have improved relative to CTs and RICE since the December 2024 Application was filed, this should not be interpreted as an

improvement in the economics of BESS itself. Rather, the relative gap has narrowed because recent cost increases for CTs and RICE have made those alternatives more expensive; BESS has not become less costly for customers, but the overall cost of meeting Maritime Electric's capacity needs has increased. These increases translate directly into higher costs for ratepayers and could be exacerbated by further delay in procuring additional capacity.

II. THE CAPACITY DEFICIT: A REAL AND GROWING PROBLEM

18. PEI Faces a Documented Structural Capacity Shortfall

- (a) Maritime Electric's updated Capacity Resource Adequacy Assessment ("CRAA"), filed as part of its July 2026 responses to Commission Staff interrogatories (Exhibit M-30), confirms that the Company faces a capacity deficit of 70 MW in 2027 alone, growing to 139 MW by 2035, even after assuming the continued availability of all currently contracted firm off-Island capacity.
- (b) The deficit is not a theoretical future risk. It is a present reality. In the winter of 2024–2025, Maritime Electric's peak load reached 346 MW on January 30, 2025, at a temperature of only -14.9°C — a load level that in 2023 would have been considered an anomaly achievable only during a polar vortex. In the 2024-2025 winter, Maritime Electric experienced six days on which its customer load exceeded 326 MW, which represented the Company's total firm capacity resources in 2025. That the Company successfully served customers on those days was attributable to favourable wind generation and the availability of non-firm imports from New Brunswick — neither of which is guaranteed. The Company dispatched its existing combustion turbines during these events to maintain supply.
- (c) The existing system peak has grown from 249 MW in 2016 to 362 MW in 2026 — a 45 per cent increase in 10 years. This growth is driven primarily by the electrification of residential space heating, which has transformed PEI's historically mild winter demand profile into one that is now sharply temperature-sensitive and increasingly coincident with the regional peak in New Brunswick and Eastern Canada generally.

19. The Commission's Own Expert Confirmed the Need for Approximately 100 MW of On-Island Capacity

- (a) Synapse, retained by the Commission as its independent expert, concluded in its April 9, 2026, Final Report that the scale and timing of the proposed on-Island capacity increase is reasonable, and specifically acknowledged that it remains reasonable to procure a first increment of roughly 100 MW as the Application currently considers. Synapse further confirmed that Maritime Electric's proposal to meet approximately 50 per cent of its capacity requirements with on-Island resources is a reasonable planning guideline.
- (b) The parties are not far apart on the core question of need. Both Maritime Electric and Synapse agree that additional on-Island capacity is required. Their disagreement is about the technology — specifically, whether that requirement should be met with the proposed combustion turbines, with a large BESS, or with some combination.

20. The E3 Resource Adequacy Study Quantifies the Deficit and the Required Response

- (a) To inform its analysis, Maritime Electric retained E3 to conduct a system-specific probabilistic resource adequacy study, filed as an attachment to Maritime Electric's July 24, 2026 interrogatory responses (Exhibit M-30, IR-23 – Attachment 1). E3's analysis applies the same industry-standard LOLE methodology and 0.1 days per year reliability target mandated by the Northeast Power Coordinating Council ("NPCC") — the same standard applied across Atlantic Canada and throughout North America.
- (b) The E3 Study found that, absent additional resources, Maritime Electric's system will be exposed to loss-of-load events as frequently as 24 days per year by 2030 — far greater than the acceptable standard. To achieve a 0.1 LOLE by 2030, 115 MW of perfect capacity (i.e., Effective Load Carrying Capability, or "ELCC") must be added. This is the quantified scale of the current problem.

21. A Growing Dependence on Off-Island Resources

- (a) Historically, Maritime Electric maintained over 50 per cent of its total capacity resources on PEI, with the remaining supply drawn from firm imports under its Energy Purchase Agreement ("EPA") with NB Power and Maritime Electric's participation share of the Point Lepreau Nuclear Generating Station. That balance

provided a stable foundation in recent years: on-Island dispatchable resources handled peak load periods and contingencies while off-Island imports supplied the bulk of energy.

- (b) That balance has eroded. In 2022, for the first time, less than 50 per cent of Maritime Electric's capacity resources were located on PEI. That percentage has continued to fall. The erosion reflects both load growth — driven by the electrification of space heating and population growth — and the fixed nature of the interconnection capacity that limits what can be imported from New Brunswick. Of Maritime Electric's 270 MW of firm intertie access rights, 220 MW are committed to firm imports (190 MW under the EPA and 30 MW for Point Lepreau). The remaining headroom for additional firm imports is approximately 50 MW — insufficient to close any significant portion of the growing deficit, even if additional off-Island capacity was available for purchase.

22. **Non-Firm Imports Are Not a Reliable Solution**

- (a) The critical insight underpinning this Application is that the conditions that drive Maritime Electric's peak load — extreme cold — are the same conditions that drive peak loads across Eastern Canada. When PEI's system is stressed, so is New Brunswick's. During the February 2023 polar vortex, Hydro-Québec effectively reduced its exports to New Brunswick from approximately 1,000 MW to near zero because of its own domestic capacity constraints. NB Power has itself stated that Hydro-Québec does not have excess capacity during the coldest winter months and does not offer a capacity-backed product — meaning energy from Hydro-Québec may be curtailed precisely when PEI needs capacity most.
- (b) The E3 Study confirms this dynamic in its modeling assumptions: non-firm imports from New Brunswick are assumed unavailable when Maritime Electric's system load exceeds 324 MW. This threshold is exceeded during 10 per cent of winter hours and 2.6 per cent of all hours under median conditions — and more frequently in cold winters. It is during those same hours that reliability is most at risk.

23. The Aging On-Island Fleet Cannot Meet Growing Demand

- (a) Maritime Electric's on-Island combustion turbine fleet consists of CT1 (15 MW), CT2 (25 MW), and CT3 (50 MW). CT1 and CT2, are both over 50 years old and will be retired in 2031 and 2033, respectively. Their retirement will eliminate 40 MW of on-Island capacity at a time when the deficit is already significant and growing. The E3 Study's 115 MW need figure is based on the year 2030, and represents the need prior to the retirement of CT1 and CT2. Their planned retirement makes the requirement for new on-Island generation even more urgent than the 2030 analysis alone suggests.

III. THE PROCESS: HOW MARITIME ELECTRIC IDENTIFIED AND PURSUED THE PROENERGY OPPORTUNITY

24. The December 2024 Application

On December 18, 2024, Maritime Electric filed its original Application for the On-Island Capacity for Security of Supply Project. That Application proposed 150 MW of new dispatchable generation, consisting of a 10 MW BESS, a 50 MW CT, and 90 MW of RICE. The December 2024 Application was grounded in a comprehensive Capacity Resource Study prepared by Sargent and Lundy LLC ("S&L"), which identified the need for additional on-Island dispatchable capacity and recommended a portfolio of technologies. Following the February 2023 polar vortex, S&L updated its recommendation upward from an initial 85 MW to a range of 125 to 150 MW, reflecting the more severe load conditions and their implications for reliability.

25. Market Conditions Drove Cost Escalation and the Need for a New Approach

Between the filing of the December 2024 Application and May 2025, updated cost estimates from S&L showed that overnight capital costs for the proposed 50 MW CT had increased by 16 per cent and for the RICE plant by 19 per cent. These increases reflected global market conditions: CT manufacturers such as GE Vernova ("GEV") and Siemens Energy were reporting backlogs of three to four years, driven by unprecedented global demand from data centres, electrification, and coal plant retirement. Each month of delay increased the risk that no commercially viable capacity could be commissioned before 2030 or later.

26. NB Power Identified the ProEnergy Opportunity

- (a) In February 2025, NB Power informed Maritime Electric that it was developing a new 400 MW combustion turbine facility in Centre Village, New Brunswick, using ProEnergy as its exclusive provider of PE6000 aeroderivative CTs. NB Power inquired whether Maritime Electric wished to participate by expanding the order from four 100 MW packages to five — adding one additional 100 MW package (two 50 MW turbines). NB Power explained that it had selected the PE6000 precisely because of its alignment with the existing GEV LM6000 platform, the same technology as Maritime Electric's existing CT3 at the Charlottetown Generating Station.
- (b) Maritime Electric evaluated the opportunity and recognized that, while participating in NB Power's off-Island procurement was not feasible due to intertie constraints, a parallel on-Island project could be structured if Maritime Electric secured its own Slot Reservation Agreement with ProEnergy and aligned its installation schedule with NB Power's Centre Village project.

27. The Supplemental Filing: August 14, 2025

- (a) On August 14, 2025, Maritime Electric filed its Supplemental Filing with the Commission, formally presenting the ProEnergy Opportunity and requesting approval of a Work-in-Progress Deferral Account to enable time-sensitive commercial commitments. The Supplemental Filing described the key features of the Accelerated Capacity Solution:
 - (i) Two 50 MW PE6000 aeroderivative CTs, refurbished versions of the GEV LM6000 platform identical to CT3, to be installed at the Charlottetown Generating Station (a brownfield site with existing fuel, water, and grid infrastructure);
 - (ii) A total estimated project cost of approximately CAD \$334 million (subsequently updated to \$353 million as of April 2026, a 5.7 per cent increase), representing a cost of approximately \$3,240/kW including emissions controls;

- (iii) Fixed pricing under a turnkey Engineering, Procurement and Construction contract with ProEnergy, substantially reducing cost escalation risk once a contract is signed;
- (iv) A target commercial operation date of December 2028 (revised to October 2029 following ProEnergy's slot reservation update in March 2026);
- (v) Dual-fuel capability (natural gas and ultra-low-sulfur diesel), synchronous condensing capability for on-Island voltage support, fast-start capability (under 10 minutes), hydrogen readiness up to 35 per cent blend, and black start functionality; and
- (vi) Shared construction resources and mobilization with NB Power's Centre Village project, resulting in cost efficiencies and reduced schedule risk.

28. Updated Pricing and Regulatory Urgency: April 2026

In March 2026, ProEnergy informed Maritime Electric that it had secured reservations for 40 additional CT units, which altered the available slot reservation for December 2028 and necessitated a revised delivery schedule targeting October 2029. Updated equipment pricing was provided in late March 2026 and filed with the Commission by letter dated April 17, 2026. The revised total project cost is \$353 million (a 5.7 per cent increase). Three early-stage payments now total USD \$43.68 million, due no later than September 30, 2026, representing an increase of USD \$8.96 million from the original pricing. Despite these changes, the ProEnergy Opportunity remains the least-cost and most timely effective solution to address the Company's capacity deficit.

IV. WHY THE PROENERGY OPPORTUNITY SHOULD BE APPROVED

29. The ProEnergy Opportunity Provides Firm, Dispatchable Capacity That Cannot Be Substituted at Comparable Scale or Cost

- (a) The ProEnergy Opportunity provides 100 MW of dispatchable, firm generating capacity that can operate at full output for extended periods during critical winter reliability events. The E3 Study found that the two 50 MW CTs have a combined ELCC of approximately 75 MW of perfect capacity, and that each subsequent 50 MW unit has a 75 per cent ELCC. Critically, CTs do not exhibit the saturation effect

that characterizes storage resources: their ELCC is stable and predictable regardless of how many additional units are added to the portfolio.

- (b) This reliability characteristic is fundamental. The Commission will hear testimony on whether a large battery energy storage system (“BESS”) could provide equivalent capacity. The E3 Study addresses this directly, and the answer is no — not at comparable scale.

30. The E3 Study Demonstrates That Battery Storage Cannot Substitute for the ProEnergy Opportunity

- (a) Synapse proposed that a 100 MW BESS could serve as a like-for-like alternative to the ProEnergy turbines, based on ELCC accreditation assumptions drawn from New Brunswick’s system. Maritime Electric submits this comparison is flawed for several reasons.
- (b) First, ELCC is inherently system-specific. A 100 MW BESS on a system with a peak demand of approximately 400 MW represents a fundamentally different operational challenge than the same BESS on NB Power’s system, which is approximately ten times larger. The charging and discharging of a 100 MW BESS on PEI represents a 200 MW swing in net load relative to a system peak of approximately 400MW — a materially greater operational and reliability impact than on a larger system. The E3 Study accounts for these dynamics.
- (c) Second, the E3 Study demonstrates that a 100 MW 4-hour BESS provides only approximately 43 MW of perfect capacity (ELCC) on Maritime Electric’s system — not the 90 MW assumed by Synapse based on NB Power data. The difference is not a modelling error; it is a direct consequence of the saturation effect that applies to energy-limited resources. PEI’s reliability risk is concentrated in multi-day cold weather events during which wind output is sustained at low levels. During such events, a 4-hour or even 8-hour BESS is depleted and unavailable to provide further capacity. A CT can run continuously for as long as fuel is available — with fuel storage designed to support a minimum of seven continuous days of full-load operation for Maritime Electric’s CTs.

- (d) Third, achieving 75 MW of perfect capacity equivalent to the ProEnergy Opportunity using 4-hour BESS would require approximately 300 MW of installed BESS capacity. Achieving the full 115 MW of perfect capacity needed by 2030 through BESS alone would require approximately 540 MW of 4-hour BESS — more than 130 per cent of Maritime Electric's forecast 2030 median peak demand. This is not a practical planning outcome for any small, island electricity system.
- (e) Fourth, the Portfolio NPV Study filed by Maritime Electric in its July 2026 interrogatory responses demonstrates, across all sensitivity tests, that the portfolios with the lowest present value cost are those that include the ProEnergy Opportunity. Portfolios relying exclusively or predominantly on BESS have the highest present value costs, despite lower initial installed cost per kilowatt ("kW"), because of the significantly larger nameplate capacity required and the lifecycle replacement costs associated with battery systems.

31. Maritime Electric Does Not Oppose Battery Storage — It Opposes Over-Relying on It

- (a) Maritime Electric has consistently acknowledged that battery energy storage has a role to play in PEI's long-term resource mix. The December 2024 Application included a 10 MW BESS as a component of the proposed portfolio. The E3 Study explicitly identifies portfolios that combine the ProEnergy Opportunity with BESS resources. For example, Portfolio 2 in the E3 Study combines 100 MW of combustion turbines (the ProEnergy Opportunity), 40 MW of RICE generation, and a modest 9 MW BESS, achieving 115 MW of combined ELCC with a total nameplate of 149 MW — the most efficient nameplate-to-ELCC ratio of all portfolios analyzed.
- (b) The debate before the Commission is not, therefore, about whether BESS belongs in the resource mix. It does. The question is whether BESS can substitute for dispatchable thermal generation as the foundational first step. The E3 Study answers clearly: it cannot, not at a scale that is technically or economically feasible for PEI. Firm, dispatchable generation must be the foundation. BESS is a complement to that foundation, not a replacement for it.

32. The Duration Limitation of Battery Storage Is a Critical Reliability Gap

- (a) The Commission should understand what “periods of greatest reliability risk” looks like for Maritime Electric. The E3 Study identifies the most stressed reliability events as occurring during coldest winter mornings and evenings — but they can extend across entire days and multi-day cold snaps when all three adverse factors coincide: (1) high peak demand from electric heating; (2) sustained low wind output; and (3) forced outages of large thermal units (either on-Island or at Point Lepreau). During the February 2023 polar vortex, Maritime Electric’s CTs operated for 41 to 52 consecutive hours and generated a combined 2,139 megawatt-hours (“MWh”). During the January 2026 cold weather event, CT3 alone operated for 59 consecutive hours generating 1,273 MWh.
- (b) A 4-hour BESS cannot meet that operational profile. Once discharged, it must be recharged — drawing energy from the grid during the very period of peak demand. An 8-hour BESS improves the situation, but only marginally: in a multi-day cold snap with sustained low wind, the energy available for recharging during off-peak hours may itself be constrained. The E3 Study confirms this: the ELCC of 8-hour BESS saturates well before it can close the Island’s reliability gap on its own. Only firm, dispatchable resources — which can generate continuously for as long as fuel is available — can provide full, reliable capacity during these events.

33. The ProEnergy Opportunity Is the Least-Cost Available Solution

- (a) The Portfolio NPV Study results demonstrate that the ProEnergy Opportunity is part of the least cost available solution to closing the gap of Maritime Electric’s capacity needs. Portfolio options from the E3 Study that rely more heavily on BESS require substantially larger nameplate capacity additions and have higher present value costs compared to portfolios with the ProEnergy Opportunity.
- (b) In addition to cost competitiveness, the ProEnergy Opportunity has additional advantages that bear directly on the Commission’s analysis:
 - (i) Fixed pricing: The turnkey Engineering, Procurement and Construction contract structure substantially reduces the cost escalation risk that would accompany any procurement initiated today through a competitive request

for proposal process, given the three-to-four year backlogs reported by major CT manufacturers.

- (ii) Brownfield site: The Charlottetown Generating Station is an existing power generation facility with fuel storage, grid connections, and water treatment infrastructure already in place. Permitting is simplified by the existence of a 2014 Environmental Impact Assessment for a comparable project at the same site. These advantages reduce both cost and schedule risk.
- (iii) Operational familiarity: The PE6000 is a refurbished GEV LM6000, the same platform as CT3. Maritime Electric's operations team has direct experience with this technology, simplifying training, spare parts management, and maintenance.

34. Timeline Urgency: Any Delay Means Additional Winters at Risk

- (a) The E3 Study confirms that Maritime Electric needs 115 MW of perfect capacity by 2030 to avoid loss-of-load events as frequently as 24 days per year. The ProEnergy Opportunity, if approved, provides a commercial operation date of October 2029. If it is not approved, the next earliest realistic in-service date for any alternative thermal option would be 2031 or later, given that major CT manufacturers currently carry three-to-four year order backlogs. If a large BESS alternative were pursued instead, the scale required — approximately 300 MW of 4-hour storage — would itself require substantial engineering, land acquisition, and interconnection work, making it unlikely to be operational materially sooner.
- (b) The NPCC 2025 Maritime Area Comprehensive Review of Resource Adequacy confirms that the Maritime region as a whole does not meet the 0.1 LOLE criterion in 2026 and 2027, which have base case LOLE results of approximately 0.25. Maritime Electric's on-Island position is even more constrained with customers exposed to loss-of-load events as frequently as 24 days per year by 2030. Every winter that passes without additional on-Island dispatchable generation increases the risk that Islanders will experience load shedding events or rotating outages during extreme cold weather.

The ProEnergy Opportunity In The Broader Context Of Maritime Electric's Electrical System

35. Maritime Electric wishes to be clear about what it is and is not asking for. This application is not a request for permission to build the complete solution to PEI's capacity challenge. It is a request for approval of the first, foundational, and most urgent element of that solution.

(a) Upon approval of the ProEnergy Opportunity, Maritime Electric will:

- (i) Address 75 MW of the 115 MW perfect capacity shortfall projected for 2030;
- (ii) Retain an approximately 40 MW of perfect capacity shortfall by 2030, which the Company will address through a subsequent application that will evaluate additional combinations of dispatchable generation, battery storage, and other resources;
- (iii) Retain the flexibility to integrate BESS resources as a complement to the new CTs; and
- (iv) Begin planning for the replacement of CT1 and CT2, whose retirements in 2031 and 2033 will require additional capacity beyond the ProEnergy units.

(b) This staged approach is consistent with industry best practices and reflects Maritime Electric's statutory obligation under section 3(a) of the *Electric Power Act* to ensure that it has access to sufficient capacity resources to supply its customers during system peaks without interruption. The ProEnergy Opportunity is the essential first step.

Reliability Beyond Resource Adequacy: System Resilience

36. The E3 Study identifies an additional dimension of risk that is distinct from conventional resource adequacy planning: the resilience of PEI's electrical system under scenarios involving partial or full disconnection from the New Brunswick interconnection. The E3 Study recommends that Maritime Electric conduct a dedicated resilience analysis to assess system performance during extended disconnection events and determine whether an incremental amount of thermal (e.g., CT) capacity is required beyond the need

already established in the E3 Study — particularly as the proportion of electrically heated homes continues to increase.

37. The ProEnergy Opportunity directly contributes to system resilience in several ways. The two new PE6000 combustion turbines include synchronous condensing capability, providing on-Island reactive power and voltage support that reduces the system's vulnerability during disturbances and contingency events. Adding two 50 MW synchronous condensing units to the Charlottetown Generating Station materially improves system stability during disconnection events, increasing the number of generators supporting the grid and reducing the impact of any single generator trip. These benefits accrue regardless of whether a disconnection actually occurs — they improve day-to-day stability across the full range of operating conditions.

CONCLUSION AND PROPOSED ORDER

38. The record in this proceeding is extensive and the case for approval of the ProEnergy Opportunity is compelling. The essential facts are not in dispute:
- (a) Maritime Electric faces a documented and growing electricity capacity deficit that will expose customers to loss-of-load events as frequently as 24 days per year by 2030 without additional resources;
 - (b) The Commission's own expert, Synapse, confirms that an approximately 100 MW increment of on-Island capacity is reasonable and necessary as a first step;
 - (c) Off-Island capacity is not available in the quantities needed, and even if it were, the transmission headroom of the interconnection is substantially exhausted;
 - (d) The ProEnergy Opportunity provides 100 MW of dispatchable, dual-fuel generation at a fixed price, on the fastest achievable timeline (October 2029), at a brownfield site with existing infrastructure;
 - (e) The E3 Study demonstrates that battery storage, while an important complementary resource, cannot substitute for the ProEnergy Opportunity: achieving comparable firm capacity using 4-hour BESS would require approximately 300 MW of installed battery capacity, and the Portfolio NPV Study demonstrates that the present value cost of BESS-dominant portfolios is materially higher than those including the ProEnergy CTs; and

- (f) If the ProEnergy Opportunity is not approved, the next realistic in-service date for an alternative solution is 2031 or later, exposing PEI customers to an unacceptable risk of load shedding through multiple additional winters.
39. Maritime Electric accordingly requests that the Commission issue an Order approving the Accelerated On-Island Capacity Development Solution — the acquisition and installation of two 50 MW PE6000 aeroderivative CTs from ProEnergy at the Charlottetown Generating Station — and confirming that the costs reasonably and prudently incurred in connection with that project are recoverable from Maritime Electric's customers through rates. This approval represents not the end of the conversation about PEI's electricity security, but a necessary and foundational beginning.

ALL OF WHICH IS RESPECTFULLY SUBMITTED at Charlottetown, Queens County, Prince Edward Island this 7th day of August, 2026.



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Lawyer for Maritime Electric Company, Limited

DOCKET: UE20742

ORDER:

IN THE MATTER of Section 17(1) of the *Electric Power Act* (R.S.P.E.I. 1988, Cap. E-4)

IN THE MATTER of the Application and Supplemental Application of Maritime Electric Company, Limited for the approval of a Supplemental Capital Budget Request for the On-Island Capacity for Security of Supply Project, pursuant to section 17 of the *Electric Power Act*, RSPEI 1988, c. E-4.

ORDER

BEFORE THE COMMISSION on August ____, 2026.

Pamela Williams, K.C., Chair

Kerri Carpenter, Vice-Chair

BACKGROUND:

1. UPON receiving the Application of Maritime Electric Company, Limited (the "Company") for the On-Island Capacity for Security of Supply Project, filed December 18, 2024, and the Supplemental Filing thereto, filed August 14, 2025, proposing an Accelerated On-Island Capacity Development Solution consisting of the acquisition of two 50 MW PE6000 aeroderivative combustion turbines from ProEnergy Services LLC ("ProEnergy") for installation at the Charlottetown Generating Station (the "ProEnergy Opportunity");
2. AND UPON the Commission having confirmed that the public hearing in this Docket is limited in scope to the sole question of whether the Company should receive Commission approval to enter into a contract with ProEnergy for the purchase of the two combustion turbines comprising the ProEnergy Opportunity;
3. AND UPON considering the evidence and submissions filed in this proceeding, including the Application, the Supplemental Filing, the Company's responses to interrogatories, the report of the Commission's independent consultant, information provided by the Added Party Intervener, the submissions of the Friends of the Commission, and the evidence and argument presented at the public hearing;

NOW THEREFORE, for the reasons given in the annexed Reasons for Order and pursuant to the *Electric Power Act*,

ORDER:

The Commission Orders as follows:

1. The Company's request for Commission approval to enter into a contract with ProEnergy for the purchase of two 50 MW PE6000 aeroderivative combustion turbines is approved.
2. The costs reasonably and prudently incurred by the Company in connection with the purchase and installation of the two combustion turbines referred to in paragraph 1 are approved for recovery from the Company's customers through rates, subject to further review by the Commission of the final costs incurred.
3. The Company shall provide the Commission with a copy of the executed contract with ProEnergy referred to in paragraph 1, together with detailed costing information, promptly following execution.
4. The Company shall continue to provide the Commission with quarterly progress reports respecting the status, timelines, and costs of the ProEnergy Opportunity.
5. In the event that any payments to ProEnergy exceed the amounts disclosed to the Commission in this proceeding, the Company shall promptly submit a written update to the Commission.

6. All other matters raised in the Company's Application of December 18, 2024, including the remaining 50 MW of capacity not addressed by the ProEnergy Opportunity, remain outstanding and are not determined by this Order.

DATED at Charlottetown, Prince Edward Island, this day of August, 2026.

BY THE COMMISSION:

Pamela Williams, K.C., Chair

Kerri Carpenter, Vice-Chair