

February 19, 2026

Mr. Robert Henderson
The Standing Committee on Natural Resources and
Environmental Sustainability
Prince Edward Island Legislative Assembly
Office of the Clerk
PO Box 2000
Charlottetown PE C1A 7N8

Dear Mr. Henderson:

Response to Information Request Regarding Electricity Capacity Solutions

This letter is provided in response to your communications dated January 9, 2026 and January 26, 2026, wherein the Natural Resources and Environmental Sustainability Committee (“Committee”) requested information from Maritime Electric Company, Limited (“Maritime Electric” or the “Company”) related to “on-Island energy generation strategies; smart meter initiatives, including demand-side management approaches; and how these efforts could align with the capacity requirements for subsea cables;” as well as “an overview of battery energy storage systems and how these may increase capacity levels on Prince Edward Island (“PEI”).”

Maritime Electric would like to clarify these important topics for the Committee. The Company is concerned by recent remarks and opinions presented to the Committee regarding PEI’s generating capacity needs and Maritime Electric’s current applications before the Island Regulatory and Appeals Commission (“IRAC”). The delay of the proposed 100 megawatt (“MW”) combustion turbine project could lead to significant negative economic consequences for PEI, caused by the heightened risk of rotating outages and increased costs associated with securing dispatchable generation. Given that PEI is a winter-peaking system with an increased reliance on electric space heating, the potential health and safety risks that all Islanders will face if rotating outages occur during the coldest periods of the year is also of great concern.

The January 2026 Polar Vortex Underscored Regional Capacity Challenges

From January 24 to 26, 2026, Eastern Canada was impacted by a polar vortex weather event that severely tested the limits of regional electricity grids.

During this period, Maritime Electric issued a “watch” notice through its grid status index as PEI’s electricity demand remained above 300 MW for 69 consecutive hours. On Sunday, January 25, PEI’s electricity demand reached a new all-time instantaneous peak record of 404 MW between the hours of 5 and 6 p.m.¹ During the 404 MW peak, on-Island dispatchable generators (e.g., combustion turbines) were producing approximately 65 MW and favourable on-Island wind generation conditions helped supply another approximately 120 MW. However, by the next morning, wind generation decreased sharply to approximately 5 MW. If this decline had occurred only hours earlier, PEI would have faced a supply shortage of at least 15 to 20 MW.²

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¹ The hourly average peak was 399 MW, and the instantaneous peak was 404 MW.

² The 15 to 20 MW shortfall assumes no curtailment from NB Power. The shortfall would be larger if there was a curtailment from NB Power.

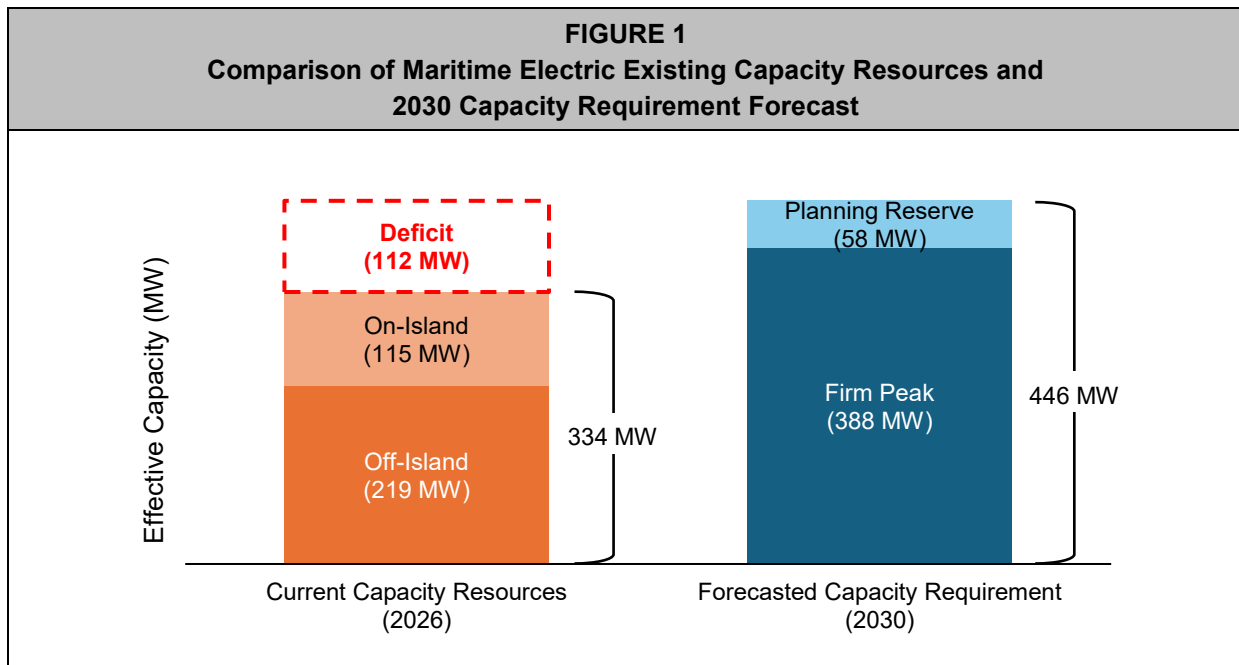
New Brunswick (“NB”) was able to navigate the extreme cold conditions, maintaining full operation of its generating capacity throughout the weekend and relying on significant imports from Hydro Quebec.

Meanwhile, Nova Scotia and Newfoundland and Labrador narrowly avoided rotating outages. Both provinces issued “warning” notices and urged customers to conserve energy during peak periods, relying on emergency generation from neighbouring utilities to maintain supply.

This recent event clearly demonstrated the growing capacity constraints across the region.

Maritime Electric has an Immediate Capacity Deficit Problem

Electricity grid system operators, including Maritime Electric, must install or secure sufficient generating capacity to meet peak demand, along with an additional planning reserve margin. This margin ensures reliable supply during extreme weather events or unexpected generator outages. Maritime Electric is required to have a planning reserve margin of 15 per cent above its firm peak demand.³ For example, the Company’s projected firm peak demand for 2030 is 388 MW; therefore, with a required 15 per cent planning reserve equivalent to 58 MW, the total capacity required is 446 MW. Figure 1 illustrates how the Company’s current capacity resources in 2026 (334 MW) compare to the forecasted capacity requirement in 2030 (446 MW).



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³ Firm peak demand represents the highest anticipated demand, after deducting 14 MW from interruptible commercial customers who are curtailed prior to initiating rotating outages for other customers. The magnitude of Maritime Electric’s planning reserve is dependent on the level of planning reserve required for the Maritimes area by the Northeast Power Coordinating Council. Refer to IRAC Docket UE20742, Exhibit M-1, Section 5.3.4 (page 43).

Maritime Electric's current capacity resources total 334 MW (219 MW from off-Island and 115 MW from on-Island).⁴ Without adding new capacity resources, the Company projects a capacity deficit of 112 MW by 2030. New Brunswick Energy Marketing Corporation ("NBEM"), a part of New Brunswick Power Corporation ("NB Power"), has informed Maritime Electric that no additional firm capacity is available at this time. Additionally, Maritime Electric's two combustion turbines in Borden-Carleton (totaling 40 MW) are scheduled for retirement in the early 2030s, as they will reach the end of their 60-year operational life. These figures highlight the current and projected realities resulting from recently experienced growth in electricity demand on PEI.

Immediate solutions are needed to address this capacity deficit to mitigate the increasing risk of rotating outages due to a lack of supply.

The New Brunswick Interconnection has a Limit

The four subsea cables connecting PEI to NB have a combined rated capacity of 560 MW.⁵ However, due to transmission constraints in NB and contingency requirements associated with the subsea cables, the maximum capacity that can actually be imported to PEI is limited to 300 MW.⁶ Transmission constraints in NB are related to the Memramcook substation and the transmission network feeding it.

There have been suggestions that Maritime Electric is considering new combustion turbine generation solely to address scenarios where one or more subsea cables are out of service. This is not accurate. The 300 MW limit for the interconnection is based on normal operating conditions, with all four cables in service.⁷

Despite the NB interconnection's *transmission* capacity limit of 300 MW, it is important to recognize that NBEM has informed Maritime Electric that no additional firm *generating* capacity is available at this time. As a result, the Company currently only has 219 MW of generating capacity reservations from off-Island (see Figure 1).⁸ The maximum 300 MW interconnection limit enables non-firm energy imports for much of the year during non-peak periods but provides a false sense of security during peak periods, when neighbouring utilities cannot be relied upon to provide additional generating capacity.

Demand-Side Management Strategies are Part of the Solution

Demand-side management ("DSM") strategies represent a key component in addressing PEI's capacity deficit. Maritime Electric is fully supportive of DSM initiatives and encourages electricity conservation where possible.

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⁴ Firm capacity resources include 29 MW from the Point Lepreau Nuclear Generating Station, 190 MW from NBEM, 89 MW from on-Island combustion turbines and 26 MW of effective capacity from on-Island wind. Refer to IRAC Docket UE20742, Exhibit M-1, Section 5.1.2 (page 17).

⁵ Cables 1 and 2 have a rating of 100 MW each and Cables 3 and 4 have a rating of 180 MW each.

⁶ Refer to IRAC Docket UE20742, Exhibit M-1, Section 7.2.2 (page 74).

⁷ NB Power is currently studying ways to increase this import limit to 350 MW after the installation of NB Power's combustion turbine project in Centre Village, and would require the implementation of automatic load shedding measures if a cable were to trip.

⁸ Off-Island capacity resources include 29 MW from Point Lepreau Nuclear Generating Station and 190 MW from NBEM.

efficiencyPEI is the independent administrator of all energy efficiency and DSM initiatives on PEI.⁹ DSM plans and targets are established in the Prince Edward Island Energy Corporation's ("PEIEC") Energy Efficiency & Conservation ("EE&C") Plan.¹⁰ The most recent EE&C Plan, approved by IRAC, spans the three-year term from March 1, 2023 to February 28, 2026, and incorporates demand response initiatives such as customer-owned energy storage, customer curtailment and load control programs.¹¹ In accordance with IRAC's Order UE24-04 approving the PEIEC's EE&C Plan, Maritime Electric customers fund a portion of the EE&C Plan in the amount of approximately \$2.6 million over the three-year period.

The EE&C Plan estimates that demand response initiatives would achieve a peak reduction of 20.5 MW by 2026, which Maritime Electric has included in its capacity forecasts. However, to date, Maritime Electric is not aware of any demand response initiatives that have been completed by the PEIEC or efficiencyPEI. Since these planned demand response initiatives have not yet been implemented, the peak demand and capacity deficit is larger than projected.

On December 10, 2025, Maritime Electric participated in preliminary discussions with efficiencyPEI regarding a potential demand response pilot. The Company will continue to collaborate with efficiencyPEI on the implementation of DSM strategies to help mitigate the capacity deficit.

Smart Meter Initiatives are Part of the Solution

Smart meter initiatives, including the potential implementation of time-of-use ("TOU") rates, may contribute to addressing the capacity deficit in the future.

Maritime Electric is actively installing smart meters for all its approximately 90,000 customers and, concurrently, developing a new Customer Information System ("CIS"). The Company anticipates that all smart meters will be installed by 2027, with the new CIS expected to be operational by 2028. The deployment of smart meters and the new CIS are essential for Maritime Electric to effectively analyze customer consumption patterns and assess opportunities to shift electricity usage through TOU rates. At present, the existing metering infrastructure and CIS do not support the implementation of TOU rates.

Although TOU rates have the potential to reduce peak demand, their effectiveness is anticipated to be modest. The PEIEC commissioned a study prepared by Dunsky Energy + Climate Advisors, which found that TOU rate structures in PEI would provide limited potential for peak reduction.¹² The study estimated that TOU rates could achieve a peak reduction of 10.7 MW on PEI, equivalent to 3.1 per cent of the projected 2030 PEI peak.¹³ This limited impact is primarily attributed to PEI's flat daily load curve (i.e., electricity demand remains relatively steady) during peak days.

Battery Cost Comparisons

There are several important factors to consider when comparing the cost of battery storage to the 100 MW combustion turbine project proposed by Maritime Electric.

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⁹ efficiencyPEI was designated the independent administrator of all energy efficiency on PEI following an Action Item released in the Prince Edward Island 2016 Provincial Energy Strategy.

¹⁰ efficiencyPEI is the service agency for the PEIEC's EE&C Plan.

¹¹ Refer to IRAC Docket UE41401, Exhibit E-9(d).

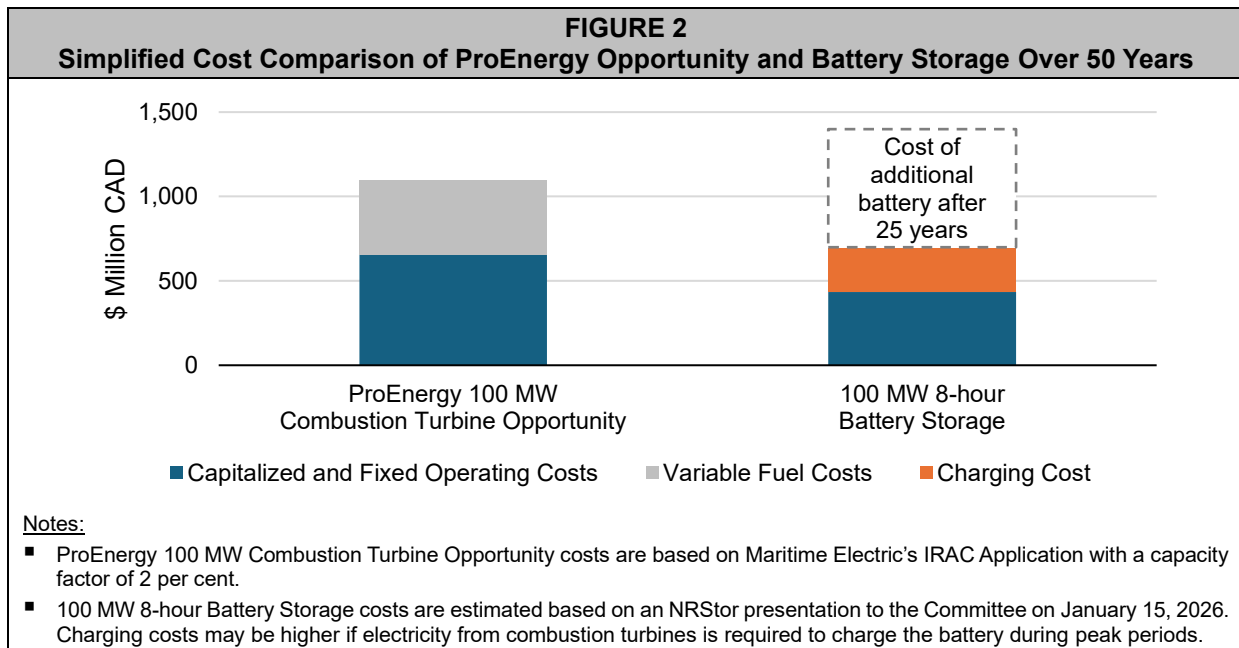
¹² Refer to IRAC Docket UE41401, Exhibit E-1(i).

¹³ Ibid, Section 3.2.3 (page 66).

A recent cost comparison presented to the Committee is misleading as it suggests that the combustion turbines proposed by Maritime Electric would operate at a capacity factor of 25 per cent, which significantly overstates annual fuel costs.¹⁴ This is not accurate. Maritime Electric’s applications before IRAC clearly identify the combustion turbines as peaking generators, with a projected capacity factor between 1 and 2 per cent.¹⁵

Cost comparisons have also overlooked the difference in useful life between combustion turbines and battery storage. Although the ProEnergy (the turbine package manufacturer) combustion turbines are refurbished, Maritime Electric expects them to have a useful life similar to that of new combustion turbines (i.e., approximately 50 years).¹⁶ This expectation is based on the “zero-houring” refurbishment process, which effectively resets the operational life of the turbines.¹⁷ Performance data from ProEnergy’s existing refurbished units further supports the estimated 50-year useful life.¹⁸ In contrast, battery storage systems are generally reported to have a useful life of only 20 to 25 years, which means the cost of a battery storage system will be incurred at least twice over the equivalent life cycle of a combustion turbine.

Figure 2 provides a simplified cost comparison between the ProEnergy 100 MW combustion turbine opportunity and a 100 MW 8-hour battery over a 50-year period, with the above-noted factors considered. To ensure an accurate comparison, the analysis includes the cost of an additional battery storage system to account for its shorter useful life. It is important to note that this simplified cost comparison does not consider that battery storage has an effective load carrying capability (“ELCC”) that is less than 100 MW.¹⁹ Therefore, the amount of battery storage required and associated cost would be even higher to achieve an ELCC of 100 MW.



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¹⁴ Capacity factor is a ratio of a generator’s actual annual output relative to the potential maximum annual output if it operated continuously at maximum power. It is a measure of how much a generator operates over the course of a year.

¹⁵ Refer to IRAC Docket UE20742, Exhibit M-15, Response to IR-5 (pages 12-13).

¹⁶ Maritime Electric’s two combustion turbines located in Borden-Carleton are approaching 60 years of operation.

¹⁷ Refer to IRAC Docket UE20742, Exhibit M-12, Section 5.1 (page 16).

¹⁸ Refer to IRAC Docket UE20742, Exhibit M-14 (page 1).

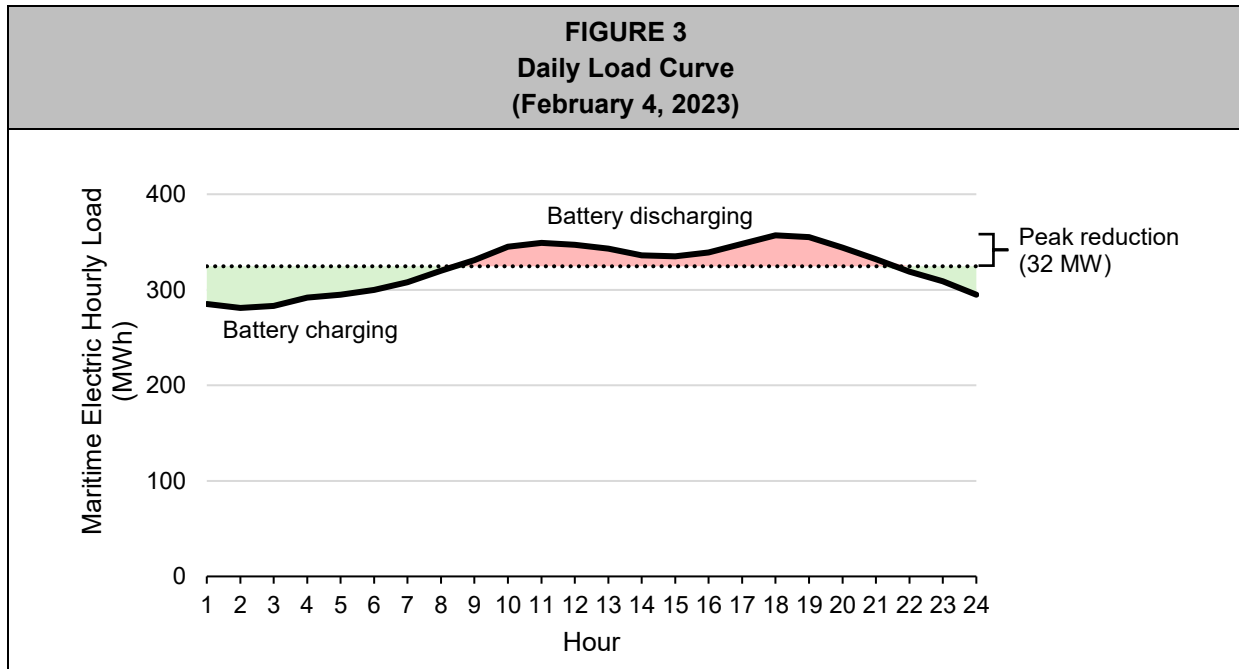
¹⁹ ELCC is the portion of battery storage that can be counted as capacity.

In summary, there are many factors that must be considered when comparing the cost of battery storage to the 100 MW combustion turbine project. While much of the discussion around battery storage has focused on cost, it is important not to overlook a more critical issue; that is, the extent to which battery storage can help address the electricity system's 112 MW capacity deficit. The key question is *how much demand can battery storage effectively shift to reduce the system peak?* As with TOU rates, PEI's flat daily load curve is the limiting factor.

PEI's Flat Daily Load Curve Limits the Effectiveness of Battery Storage

PEI's electricity demand remains relatively steady throughout peak days, which results in a flat daily load curve. Figure 3 illustrates Maritime Electric's daily load curve (represented by the solid black line) during the February 4, 2023 polar vortex, representing demand for each hour of the day. Although demand is lower at nighttime than during the daytime, the 24-hour load curve is relatively flat. As a result, battery storage has limited ability to significantly reduce the Island's peak demand and address the capacity deficit.

Battery storage can reduce peak demand by storing surplus electricity at nighttime (charging) and releasing that electricity during the daytime (discharging). Figure 3 illustrates this process, with battery charging shown in green and discharging shown in red, which helps smooth out the daily load curve. However, once the daily load curve becomes completely flat (represented by the dashed black line), the battery's ability to further reduce peak demand is limited because there are no more opportunities to charge. Maritime Electric's evidence submitted to IRAC indicates that the maximum peak reduction achievable through battery storage is approximately 30 to 40 MW, which falls well short of the projected 112 MW capacity deficit in 2030.²⁰



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²⁰ It is important to note that the 30 to 40 MW reference applies to the total for solutions that shift demand such as demand response, TOU rates and battery storage. Refer to IRAC Docket UE20742, Exhibit M-1, Section 8.3 (page 113).

The limitations of using battery storage as a capacity resource are due to its short duration (e.g., 8 hours) and charging requirement. As previously noted, from January 24 to 26, 2026, PEI's electricity demand remained above 300 MW for 69 consecutive hours, during which time on-Island dispatchable generators were relied upon extensively. Although battery storage may have use cases other than acting as a capacity resource, its ability to provide adequate capacity during multi-day or long duration peak events is limited.²¹ As a result, battery storage alone is not a suitable solution to address the capacity deficit.

Battery Size Comparisons

A common question is *how are other jurisdictions able to install larger battery systems?* The answer lies in the size and characteristics of their electricity grids.

For example, in June 2025, Ontario's grid reached a peak demand of 24,862 MW – more than 62 times greater than PEI's peak. Ontario's installation of a 250 MW battery is proportionally equivalent to a 4 MW battery on PEI.²² Similarly, in February 2023, Nova Scotia Power recorded a peak demand of 2,455 MW – more than six times greater than PEI's peak. Nova Scotia Power's installation of a 150 MW battery is proportionally equivalent to a 24 MW battery on PEI.²³ Additionally, Ontario and Nova Scotia Power grids have a large share of in-province dispatchable generation resources, including baseload generation, whereas PEI does not.²⁴ A solid foundation of generation resources is critical to ensure a battery can be charged effectively.²⁵ When evaluating battery storage projects in other jurisdictions, it is essential to consider the size and characteristics of their electricity grids, which can differ significantly from PEI's system.

To be clear, Maritime Electric is supportive of battery storage. The Company's original December 2024 Application for on-Island generating capacity includes a proposed 10 MW 4-hour battery installation.²⁶ Although Maritime Electric submitted government funding applications for the battery storage component in December 2024 and April 2025, these applications were not successful.²⁷ The Company remains committed to pursuing this 10 MW 4-hour battery installation, at a minimum, and will continue to seek eligible funding opportunities. Nevertheless, while battery storage can be a valuable part of the overall solution, it cannot, by itself, completely or economically resolve the capacity deficit.

The 100 MW Combustion Turbine Opportunity is Independent of NB Power's Project

The 100 MW combustion turbine opportunity proposed by Maritime Electric arose in connection with NB Power's proposed 500 MW combustion turbine project with ProEnergy, the turbine package manufacturer. While ProEnergy typically only considers projects larger than 300 MW, PEI's proximity to NB Power's project enabled ProEnergy to consider a 100 MW project for PEI. This arrangement provides economies of scale and an attractive schedule for the smaller PEI project compared to alternatives.

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²¹ Other use cases may include energy arbitrage (i.e., charging during off-peak periods and discharging during on-peak periods for an economic benefit), however, Maritime Electric does not currently have different off- and on-peak pricing from NBEM. Refer to IRAC Docket UE20742, Exhibit M-15, cover letter.

²² 250 MW divided by 63 = 4 MW.

²³ 150 MW divided by 6.2 = 24 MW.

²⁴ Refer to IRAC Docket UE20742, Exhibit M-6, Response to IR-11(b) (page 18).

²⁵ Refer to IRAC Docket UE20742, Exhibit M-15, cover letter, Use Case 3: Capacity Resource (page 3).

²⁶ Refer to IRAC Docket UE20742, Exhibit M-1, Section 6.1 (page 47). Additionally, in February 2025, Maritime Electric applied to IRAC for two utility-scale solar projects, each with battery storage components (IRAC Docket UE20743).

²⁷ Refer to IRAC Docket UE20742, Exhibit M-6, Response to IR-18 (page 31).

For clarity, although the NB Power project has made this opportunity possible and there are significant benefits to the successive alignment of both projects, it is important to emphasize that the two projects are independent. Maritime Electric's 100 MW combustion turbine proposal is not dependent on NB Power's project and is not contractually bound to it.

Maritime Electric further notes that NB Power has already secured a manufacturing slot with ProEnergy, guaranteeing its place in the production schedule. In contrast, Maritime Electric has not yet received IRAC approval to proceed, and therefore, does not have a confirmed manufacturing slot. This lack of approval means Maritime Electric does not have a secure position in ProEnergy's production schedule. Continued delays increase the risk that ProEnergy will allocate all available near-term manufacturing slots to other customers.

With rising demand for combustion turbines driven by electrification and data center developments, the window for securing this 100 MW opportunity is highly time sensitive.

How Does PEI Ensure a Reliable Electricity Supply?

The urgency of addressing the capacity deficit cannot be overstated. The deficit is increasing, and regional supply constraints prevent neighbouring utilities from providing assistance. Therefore, Maritime Electric's solution to proceed with the 100 MW combustion turbine opportunity is critical.

While DSM strategies, TOU rates, and battery storage can contribute, these solutions have limitations and cannot fully resolve the capacity deficit.

Timely regulatory approval of the proposed 100 MW combustion turbine opportunity is essential to ensure that PEI residents and businesses have a secure and reliable electricity supply. Delay in timely approval risks cost increases due to the market demand for combustion turbines.

Thank you for the opportunity to provide this information and clarify these important issues for the Committee. With regards to the Committee's communication dated January 30, 2026, wherein the Committee requested "a briefing that provides an overview of transmission capacity and generation capacity," the Company hopes this written response provides some valuable information.

If you require additional information, please let me know and we can schedule a briefing for a time that suits.

Yours truly,

MARITIME ELECTRIC



Jason Roberts
President and Chief Executive Officer

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cc:

Hon. Sidney MacEwen, Minister of Transportation Infrastructure and Energy
Brian Matheson, Deputy Minister Transportation, Infrastructure and Energy
Gordon MacFadyen, CEO Prince Edward Island Energy Corporation