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MARITIME ELECTRIC
A FORTIS COMPANY

April 23, 2025

Island Regulatory and Appeals Commission
PO Box 577
Charlottetown PE C1A 7L1

Dear Commissioners:

On-Island Capacity for Security of Supply Project Update
Docket UE20742

Since Maritime Electric Company, Limited ("Maritime Electric" or the "Company") submitted a Supplementary Budget Request Application ("Application") for an On-Island Capacity for Security of Supply Project ("Project") on December 18, 2024, the risk of a capacity shortage, which would result in the initiation of rotating customer outages, continues to cause the Company much concern. This letter seeks to update the Island Regulatory and Appeals Commission ("Commission") on the actual customer loads experienced and resulting capacity implications of this past winter season (i.e., December 2024 to February 2025) and reiterate the urgent need for regulatory approval to proceed with the proposed upfront engineering work for the Project and a decision prior to the year end as mentioned at the Technical Session on January 22, 2025.

This urgency is driven by the increasing customer reliance on electricity for space heating, which exposes them to health and safety risks should Maritime Electric be unable to supply sufficient energy during system peak periods, coupled with the fact that the solution (i.e., more on-Island generating capacity) will take approximately three to five years to install once approved. Over the past few months, delivery timeframes for combustion turbines have significantly increased from the three-year delivery timeframe due to an increased demand for these units.

Table 1 shows Maritime Electric's historical system peaks and the temperatures at which they occurred, demonstrating a system peak that has been increasing steadily since 2021. Table 1 also shows that a record system peak of 359 megawatts ("MW") was experienced on February 4, 2023, during a polar vortex weather event when the daily average temperature was -23.8°C.[1] This past winter, on January 30, 2025, a system peak of 346 MW was experienced when the temperature was only -14.9°C, which is slightly warmer than the historical 10-year-average temperature at peak of -15.4°C.[2] Therefore, what was considered an anomaly in 2023 (i.e., a system peak of 359 MW) is now considered the norm in 2025.

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1 All system peaks referenced in this letter represent Maritime Electric's portion only.
2 Table 8 in the Application forecasted a Maritime Electric system peak of 350 MW in 2025.

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TABLE 1 Maritime Electric System Peak Loads			
Year	**Temperature at Peak[a] (°C)**	**Maritime Electric System Peak (MW)**	**Heating Coefficient (MW/°C)**
2016	-15.9	237	2.1
2017	-14.8	250	2.3
2018	-17.1	250	2.5
2019	-13.1	245	2.6
2020	-11.9	260	2.9
2021	-13.3	246	3.1
2022	-18.5	293	3.7
2023	**-23.8[b]**	**359**	**4.1**
2024	-11.0	310	4.5
2025 YTD	**-14.9**	**346**	**5.1**
10-Year Average	-15.4		

a. Source: Environment Canada (Charlottetown Airport).
b. 2023 peak occurred during a polar vortex weather event. The temperature shown is the average temperature for the 24 hours prior to the peak.

Annually, Maritime Electric calculates a heating coefficient to measure the impact of temperature on the system peak. In 2016, the heating coefficient was 2.1 MW/°C (i.e., the system peak increased by approximately 2.1 MW for every 1°C drop in temperature). Due to the rapid increase in the electrification of space heating (e.g., the installation of heat pumps), the heating coefficient has increased to 5.1 MW/°C in 2025.[3] This means that the system peak is increasingly influenced by temperatures during the winter. More alarmingly, this also means that a polar vortex weather event with a temperature of -23.8°C is currently predicted to trigger a Maritime Electric system peak of 391 MW.[4]

Maritime Electric is unable to reliably supply all customers at a system peak of 391 MW without additional on-Island dispatchable generating capacity as proposed by the Project. Maritime Electric's capacity resources in 2025 total 326 MW, as shown in Table 10 of the Application.[5] Currently, customer load beyond this level is supplied by the availability of either wind generation or non-firm energy from NB Power, neither of which is guaranteed to be available when needed. Even if the total transfer capacity of the New Brunswick Interconnection was maximized (Maritime Electric share of 270 MW), Maritime Electric's total capacity resources in 2025 would be only 382 MW, as shown in Table 17 of the Application.[6]

So far in 2025, there were **six days** that Maritime Electric's customer load exceeded 326 MW. Prior to 2025, there was only **one day** (during the 2023 polar vortex) that Maritime Electric's customer load exceeded 326 MW.[7] This demonstrates the increasingly elevated risk of capacity resource deficits resulting in the potential for rotating customer outages.

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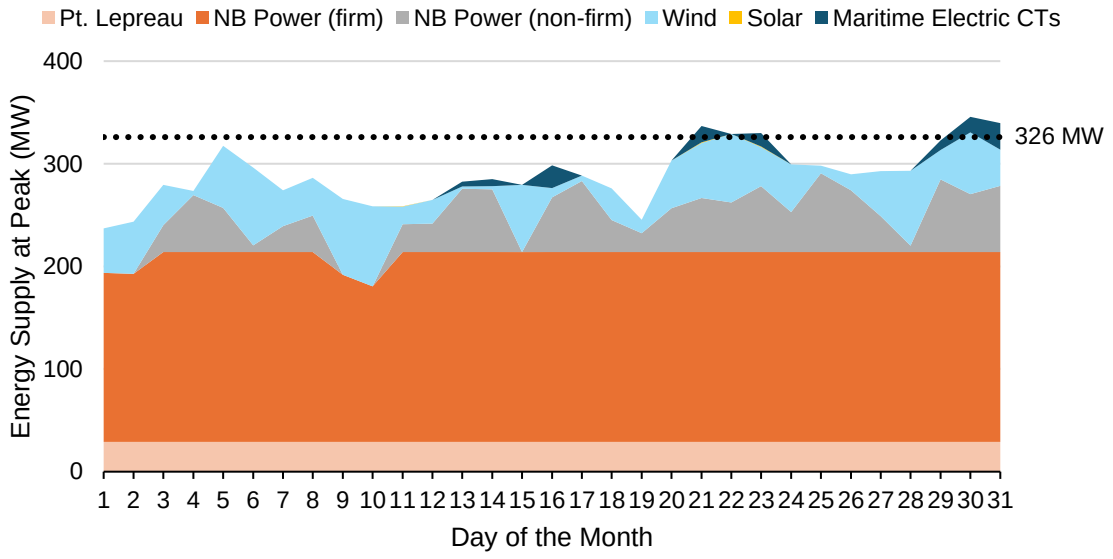
3 Based on December 2024 to February 2025 load and weather data.
4 Based on 2025 data the peak would be 391 MW: -14.9°C minus -23.8°C = 8.9°C; 8.9°C x 5.1 MW/°C = 45 MW; 45 MW + 346 MW = 391 MW.
5 Application page 45.
6 Application page 77.
7 At that time, NB Power non-firm energy was available to supply the deficit. There is no certainty it will be available during future high load events.

Figure 1 shows Maritime Electric's energy supply during daily peaks in January 2025, five days of which the customer load exceeded 326 MW.[8] Maritime Electric was able to successfully supply customer loads during these periods due to favourable wind generation (shown in light blue) and available NB Power non-firm energy (shown in grey). This Figure demonstrates Maritime Electric's significant reliance on the availability of NB Power non-firm energy to supply customer loads; however, non-firm energy is not guaranteed and can be curtailed at any time. The frequency of non-firm energy curtailments has increased in recent years due to the shrinking availability of non-firm energy from NB Power.

FIGURE 1
January 2025 Maritime Electric Energy Supply during Daily Peaks



To help mitigate the elevated risk of energy supply deficits, Maritime Electric publicly requested that customers conserve energy on two occasions during January and February 2025: (i) from January 22 to January 23 due to high customer loads and the risk of curtailments from NB Power;[9] and (ii) from February 10 to February 13 to alleviate transmission constraints in order to support the City of Summerside's supply deficit. Without additional generating capacity, it will become increasingly difficult to supply customer loads during system peak periods, exposing customers to health, safety, economic and security of supply risks.

As discussed in the Application and during the associated technical presentation earlier this year, Maritime Electric has identified a plan to address the urgent need for 150 MW of additional on-Island dispatchable generating capacity.

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8 The sixth day referred to in the previous paragraph occurred in February 2025.

9 During this period, a large generator in New Brunswick was out-of-service; therefore, non-firm energy from NB Power was limited. The large generator was in-service by the time of the January 30 system peak, which increased the availability of non-firm energy.

The upfront engineering work and the request for proposal process are the necessary first steps that will bring much needed clarity to each of the Project components, enabling more informed decisions such as the size and location of the battery energy storage system, combustion turbine, and reciprocating internal combustion engine plant. To do so, Maritime Electric respectfully reiterates its request for Commission approval of a capital expenditure deferral for up to $12 million to complete upfront engineering work and the request for proposal process. The Company is available for further in-person discussions to expedite this matter.

Yours truly,

MARITIME ELECTRIC

Jason Roberts
President and Chief Executive Officer

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cc: Gordon MacFadyen, CEO PEI Energy Corporation