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August 5, 2026

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The Island Regulatory and Appeals Commission

Ms. Cheryl Bradley
Island Regulatory and Appeals Commission
PO Box 577
Charlottetown PE C1A 7L1

Dear Ms. Bradley:

Supplemental Capital Budget Request
On-Island for Security of Supply Project – Docket UE20742
Response to Electric System On-Island Capacity Alternatives for Prince Edward Island
Final Report Prepared by Synapse Energy Economics

This letter is provided in response to the Electric System On-Island Capacity Alternatives for Prince Edward Island Final Report ("Synapse Report") prepared by Synapse Energy Economics Inc. ("Synapse") for the Island Regulatory and Appeals Commission (the "Commission"), dated April 9, 2026.[1] The Synapse Report concerns Maritime Electric's ("Maritime Electric" or the "Company") Supplemental Capital Budget Request Application for the On-Island Capacity for Security of Supply Project ("December 2024 Application"), filed on December 18, 2024,[2] and subsequent Supplemental Filing re: On-Island Capacity for Security of Supply Project ("Supplemental Filing"), filed in August 2025,[3] for an accelerated capacity development solution ("Accelerated Capacity Solution" or "ProEnergy Opportunity").

Maritime Electric has organized this response into two parts. The first part provides the Company's overall observations on the Synapse Report, including areas of agreement, areas of disagreement, and the implications of any additional evidence filed since the Synapse Report was issued. The second part addresses specific issues on which Maritime Electric disagrees with the Synapse Report and provides additional detail regarding the Company's position.

OVERALL RESPONSE AND KEY CONCLUSIONS

While Maritime Electric and Synapse disagree on certain key issues, there is notable agreement regarding the scale of Maritime Electric's capacity requirements and the need for additional on-Island resources. Put simply, the parties agree on the destination, but not on how to get there. Synapse acknowledges that maintaining approximately 50 per cent of Maritime Electric's capacity requirements as on-Island resources is a reasonable planning guideline, while recognizing that the actual percentage will naturally fluctuate over time as load grows and resources are added.[4]

Synapse also concludes that "the scale and timing of the proposed on-Island capacity increase increment is [...] reasonable" and further states that "it remains reasonable to procure a first increment of roughly 100 megawatts ["MW"] as the Application currently considers."[5] Accordingly,

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1 Exhibit C-23. The Synapse Report, dated April 9, 2026, was sent to Maritime Electric May 19, 2026.
2 Exhibit M-1.
3 Exhibit M-12
4 Exhibit C-23, page 16, where Synapse states that "*Maritime Electric's proposal to increase the amount of on-Island capacity to approximately 50 percent of its total capacity needs … is reasonable.*"
5 Exhibit C-23, page 17.

both parties agree that additional on-Island capacity is required and that an initial capacity addition of approximately 100 MW represents a reasonable first step toward addressing Maritime Electric's growing need for capacity and energy.

The principal issue separating the parties is therefore not whether additional capacity is required, but rather the capacity value that should be attributed to battery energy storage systems ("BESS") and the role such resources can reasonably play in addressing Maritime Electric's forecast capacity deficit.

Synapse assumes that a 100 MW BESS can provide between 90 MW and 100 MW of dependable capacity, relying on Effective Load Carrying Capability ("ELCC") values developed for the New Brunswick ("NB") system.[6] However, Synapse failed to perform any independent modelling or resource adequacy analysis to evaluate the capacity contribution of BESS resources on Maritime Electric's electrical system ("Maritime Electric System"). Instead, Synapse relies on accreditation values developed for a fundamentally different electrical system (i.e., the NB system), with materially different characteristics, including a peak load approximately ten times larger than the Maritime Electric System, a different load profile (morning-peaking versus evening-peaking), a substantially different generation resource mix (including hydroelectric, nuclear, and natural gas resources), broader interconnections with neighbouring jurisdictions (five interconnections compared to one), and different reliability risks.

This distinction is important because ELCC, or "perfect capacity",[7] is inherently system-specific. The dependable capacity contribution of any resource depends on the characteristics of the specific system being studied and cannot be directly transferred from one jurisdiction to another without conducting a system-specific assessment. Maritime Electric therefore submits that the appropriate question is not whether battery storage has value, but rather how much should battery storage reasonably be expected to contribute towards meeting Maritime Electric's capacity requirements. In other words, what is the amount of perfect capacity that can be displaced by battery storage on Maritime Electric's system?

Since the filing of the Synapse Report, Maritime Electric has submitted the Maritime Electric Resource Adequacy Study (the "E3 Study"), prepared by Energy and Environmental Economics, Inc. ("E3") and accompanying Portfolio Net Present Value Study (the "Portfolio NPV Study") to the Commission.[8] These studies provide a system-specific assessment of resource adequacy requirements, resource accreditation values (i.e., ELCC), and capacity mix portfolio options. Importantly, the E3 Study directly addresses many of the assumptions underlying the Synapse Report and demonstrates that the dependable capacity contribution of battery storage on the Maritime Electric System is materially lower than assumed by Synapse. The Portfolio NPV Study further indicates that portfolios containing the proposed ProEnergy Opportunity consistently rank among the lowest-cost alternatives evaluated.

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6 Exhibit C-23, NB Power Capacity Accreditation for BESS Resources, pages 38-39.

7 Perfect capacity is defined "*as the amount of a hypothetical, perfectly reliable resource – one available 100 per cent of the time with no outages – that a given set of resources is equivalent to for reliability purposes, i.e., installed capacity derated by each resource's reliability contribution (ELCC)".* E3 Study, footnote 2, page 9.

8 The E3 Study was filed as Exhibit M-30, IR-23 – Attachment 1. The Portfolio NPV Study was filed as Exhibit M-30, IR-54 – Attachment 1. Maritime Electric previously advised the Commission, in its March 20, 2026 update letter, that E3 had been retained to undertake a system-specific resource adequacy and ELCC assessment.

Together, the E3 Study, the Portfolio NPV Study, the Company's recent responses to additional interrogatories from Commission Staff and the accompanying cover letter,[9] provide a comprehensive system-specific assessment of Maritime Electric's resource adequacy requirements, resource accreditation values, and capacity portfolio alternatives. Maritime Electric does not repeat those analyses in full here, but summarizes the primary findings below.

First, the E3 Study confirms that additional capacity resources are required to maintain reliability on the Maritime Electric System. The study identified a requirement for 115 MW of perfect capacity under projected 2030 conditions,[10] prior to the retirement of CT1 and CT2.[11] Accordingly, the proposed ProEnergy Opportunity should be viewed as an initial step toward addressing Maritime Electric's long-term reliability requirements rather than as a complete solution.

Second, the analysis provided in the E3 Study demonstrates that the dependable capacity contribution of battery storage on the Maritime Electric System is materially lower than assumed by Synapse. While Synapse assumes that a 100 MW BESS provides between 90 MW and 100 MW of dependable capacity, the E3 Study found that a 100 MW, 4-hour BESS provides 44 MW of dependable capacity under projected system conditions.[12] The E3 Study further indicates that approximately 540 MW of 4-hour battery storage would be required to fill the entire resource gap (i.e., 540 MW of BESS equals 115 MW of perfect capacity).[13] The significant differences between these findings and the assumptions relied upon in the Synapse Report underscore the importance of system-specific analysis. The E3 Study evaluated battery storage performance under projected Maritime Electric System conditions, whereas Synapse relied primarily on assumptions and accreditation values derived from another jurisdiction. Maritime Electric submits that this distinction is a key reason why the respective conclusions differ so significantly.

Third, Maritime Electric subsequently evaluated a range of resource portfolio alternatives through the Portfolio NPV Study. That analysis used the system-specific accreditation values developed in the E3 Study and evaluated portfolios capable of satisfying Maritime Electric's total projected reliability requirement of 115 MW by 2030. The base case results of the Portfolio NPV Study are provided in Figure 1. Portfolios containing the proposed ProEnergy Opportunity consistently rank among the lowest-cost alternatives evaluated, while portfolios relying more heavily on battery storage require substantially greater installed capacity and result in materially higher long-term customer costs. This conclusion remained consistent across all twelve sensitivity cases evaluated in the Portfolio NPV Study.[14] Additional discussion regarding the Portfolio NPV Study was also provided in the Company's recent responses to additional interrogatories from Commission Staff and accompanying cover letter.[15]

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9 Exhibit M-30.

10 E3 Study, Key Findings, page 9, *"Maritime Electric faces an approximately 115-megawatt (MW) capacity shortfall by 2030."*

11 CT1 and CT2 refer to the existing Maritime Electric combustion turbines #1 and #2 located in Borden-Carleton, PEI.

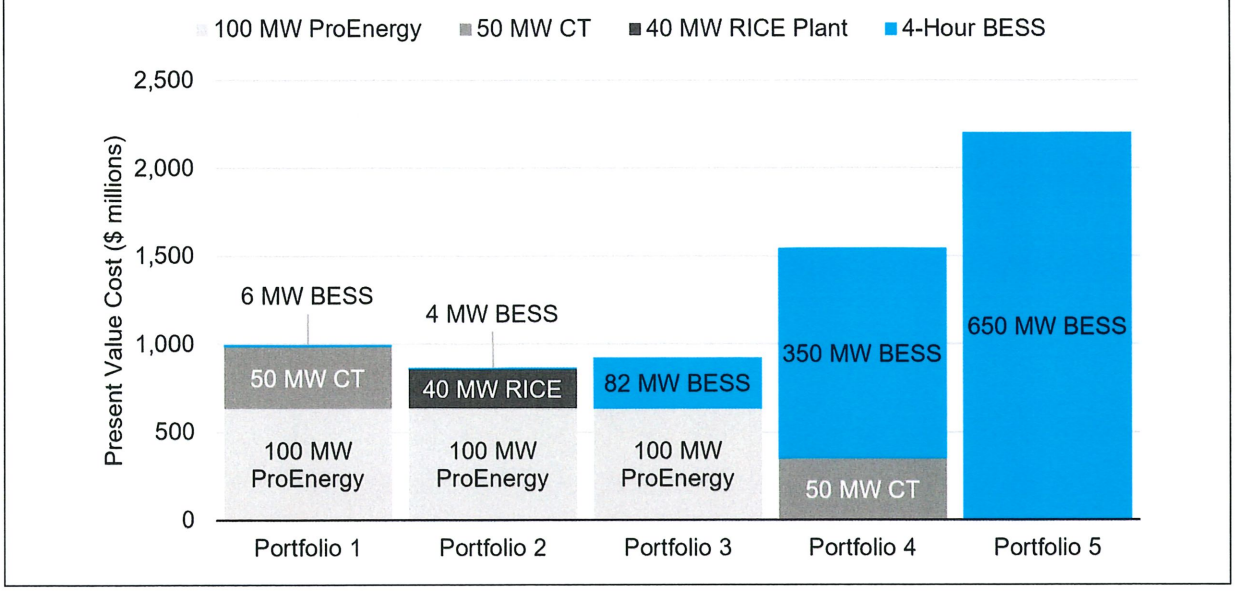
12 E3 Study, figure 5-7, page 48.

13 Refer to the E3 Study, Section 5.3.6, pp. 52-54. Portfolio 5 demonstrates that satisfying Maritime Electric's 115 MW perfect capacity requirement using only 4-hour battery storage would require approximately 540 MW of installed BESS capacity.

14 Portfolio NPV Study, Section 5.1, pages 27-29.

15 Exhibit M-30.

FIGURE 1
Base Case
Portfolio Present Value Cost Comparison



For these reasons, Maritime Electric submits that the additional evidence filed since the Synapse Report was completed confirms the validity of the proposed ProEnergy Opportunity and provides a stronger analytical foundation for evaluating both Maritime Electric's reliability requirements and the relative merits of alternative resource strategies. While Synapse concluded that an initial on-Island capacity addition of approximately 100 MW was reasonable, it recommended battery storage as the preferred technology. Since the Synapse Report was filed, Maritime Electric has provided additional system-specific evidence through the E3 Study, the Portfolio NPV Study, and subsequent interrogatory responses. That evidence supports not only the need for additional on-Island capacity but also Maritime Electric's proposed approach for meeting that need.

The following sections provide detailed responses to specific elements of the Synapse analysis and clarify areas where Maritime Electric disagrees with the assumptions or conclusions presented.

DETAILED RESPONSES TO SYNAPSE REPORT

Correction to Capacity Cost Comparison Table

The Synapse Report identifies an inconsistency in Maritime Electric's original capacity cost comparison of the ProEnergy Opportunity and BESS ELCC scenarios. Specifically, Synapse questioned the Equivalent Annual Cost values presented in Exhibit M-15, Table 1. Maritime Electric has reviewed the issue and confirmed that an incorrect cell reference had been used in the underlying spreadsheet model. The error has been corrected, and the revised results are presented in Table 1.

TABLE 1 Revised Exhibit M-15 Table 1 Capacity Cost Comparison for BESS ELCC Scenarios					
		Accelerated Capacity Solution	4-Hour BESS		
			High ELCC	Medium ELCC	Low ELCC
Nominal Capacity (MW)	A	100	50	50	50
ELCC (%)	B	100	100	75	50
ELCC (MW)	C = A x B	100	50	37.5	25
Useful Life (years)	D	50	20	20	20
Installed Cost ($ x 1,000)	E	334,229	135,523	135,523	135,523
Present Costs					
Present Cost ($ x 1,000)	F	411,757	158,684	158,684	158,684
Equivalent Annual Cost ($ x 1,000)[16]	G	~~8,235~~28,672	14,620	14,620	14,620
Present ~~Monthly~~ Annual Capacity Cost ($/MW-yr)	**H = (G x 1,000) / C**	**~~82,350~~286,720**	**292,400**	**389,867**	**584,800**

The Equivalent Annual Cost calculation for the Accelerated Capacity Solution applies the standard annuity formula using the approved weighted average cost of capital to ensure consistency with the methodology used throughout the Company's analysis.

$$C = \frac{r(NPV)}{1 - (1 + r)^{-n}}$$

$C = equivalent\ annuity\ cash\ flow$
$NPV = net\ present\ value\ (i.e., present\ value\ cost)$
$r = weighted\ average\ cost\ of\ capital$
$n = number\ of\ periods$

Importantly, while the correction increases the annualized cost previously reported for the Accelerated Capacity Solution, it does not change the overall conclusion of the analysis. As shown in revised Table 1, the Accelerated Capacity Solution continues to result in a lower annual capacity cost than each of the 4-hour BESS scenarios evaluated.

Wind Development Assumptions

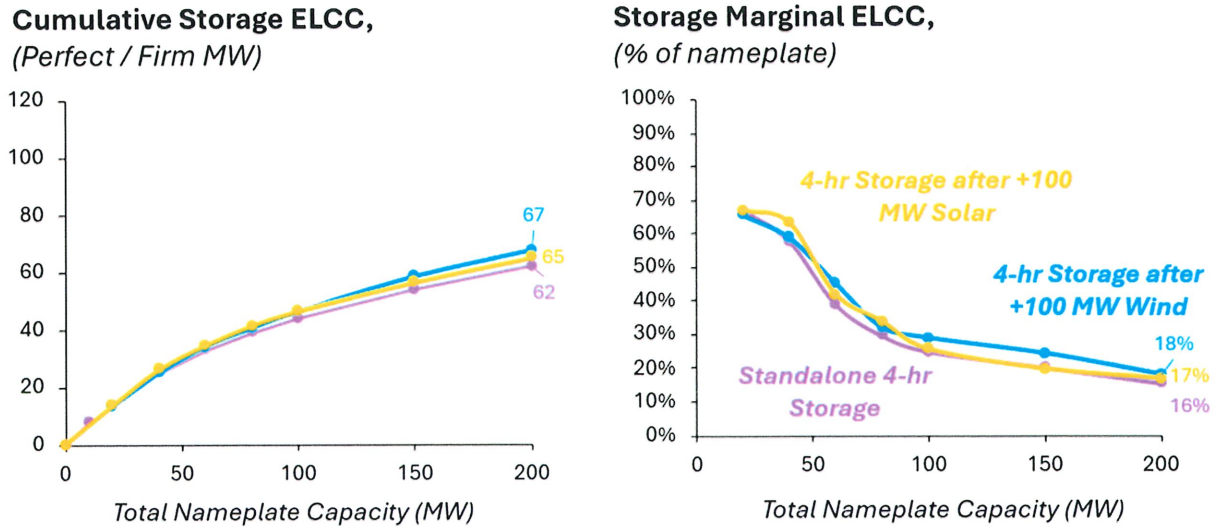
At the Technical Session held on September 22, 2025, Synapse suggested that additional wind and solar development could increase the effectiveness of battery storage by providing additional energy for charging. To address this assumption, E3 evaluated this interaction as part of their Study.

Section 5.3.4 of the E3 Study demonstrates that additional renewable generation does not materially improve the dependable capacity contribution of battery storage at higher levels of storage deployment. As illustrated in Figure 2, 200 MW of 4-hour battery storage provides 62 MW of perfect capacity.[17] Adding 100 MW of solar generation increases this value to 65 MW, while

16 Calculated using Maritime Electric's weighted average cost of capital of 6.69%.
17 E3 Study, page 50.

adding 100 MW of wind generation increases it to 67 MW. In both cases, a 200 MW nameplate addition improves system capacity requirements by 5 MW or less. This is due to the already high penetration of wind and solar resources on the Maritime Electric System.[18]

FIGURE 2
E3 STUDY FIGURE 5-8
Cumulative & Marginal ELCC of Storage with Wind & Solar



These results indicate that the primary limitation is not a lack of charging energy. Rather, as battery storage penetration increases, system reliability risk shifts from short-duration peak events toward longer-duration periods of sustained demand and low renewable output, where energy-limited resources are less effective. Maritime Electric therefore submits that the Synapse assumption is incorrect. The E3 study confirms that additional renewable generation does not materially alter the dependable capacity contribution of large-scale battery storage and does not change the need for a balanced portfolio that includes firm dispatchable generation resources.

Battery Energy Storage Costs and Lifecycle Considerations

Synapse relies on assumptions regarding future battery replacement and repowering costs to support the long-term economics of large-scale battery storage deployments.[19] In support of its position, Synapse cites the NREL Cost Projections for Utility-Scale Battery Storage: 2025 Update ("NREL Report").[20]

Maritime Electric does not dispute that battery storage costs have declined over time or that future technological improvements may further reduce costs. However, Maritime Electric submits that significant uncertainty remains regarding long-term battery degradation, repowering requirements, replacement intervals, and end-of-life asset value. The NREL Report cited by

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18 Refer to the E3 Study, Figure 2-2, page 20, which provides a comparison of specific capacity resource types (i.e., renewables, imports, firm, hydro) to total nameplate capacity and a comparison of energy supply by the same resource breakdown across several jurisdictions.

19 Synapse Report, footnote 77, page 27.

20 file:///C:/Users/mackenziead/OneDrive%20-%20Maritime%20Electric%20Company%20Ltd/C&C%20Planning%20-%20Documents/2024%20Generation%20Application/Interrogatories/PEIEC%20-%2008Jan2026/Supporting%20Information/93281%20(1).pdf

Synapse suggests a project lifetime of 15 years, noting that utility-scale battery systems have not been in operation long enough to establish reliable long-term experience regarding battery lifetimes and replacement requirements.[21] Accordingly, the lifecycle cost assumptions relied upon by Synapse should be treated with caution when evaluating resource portfolios that include BESS.

Synapse also assumes that a 100 MW BESS resource can be repowered at years 21 and 41 for approximately one-half of the initial capital cost, based on the assumption that only battery modules require replacement. Maritime Electric submits that the cost breakdown presented in Figure 3, reproduced from the NREL Report, supports a different conclusion.[22] While certain site-specific infrastructure components may be retained (i.e., electrical balance of plant ["EBOS"] and structural balance of plant ["SBOS"]), the largest cost components of a utility-scale battery facility remain battery modules, inverters, and EPC-related costs, all of which would require substantial reinvestment during a repowering project.[23] Repowering therefore requires reinvestment of the majority of the original project value.

FIGURE 3
Overnight capital cost estimate of utility-scale batteries by each of the bottom-up cost categories for 2024, 2035, and 2050 (Reproduced from the NREL, Cost Projections for Utility-Scale Battery Storage: 2025 Update (June 2025))

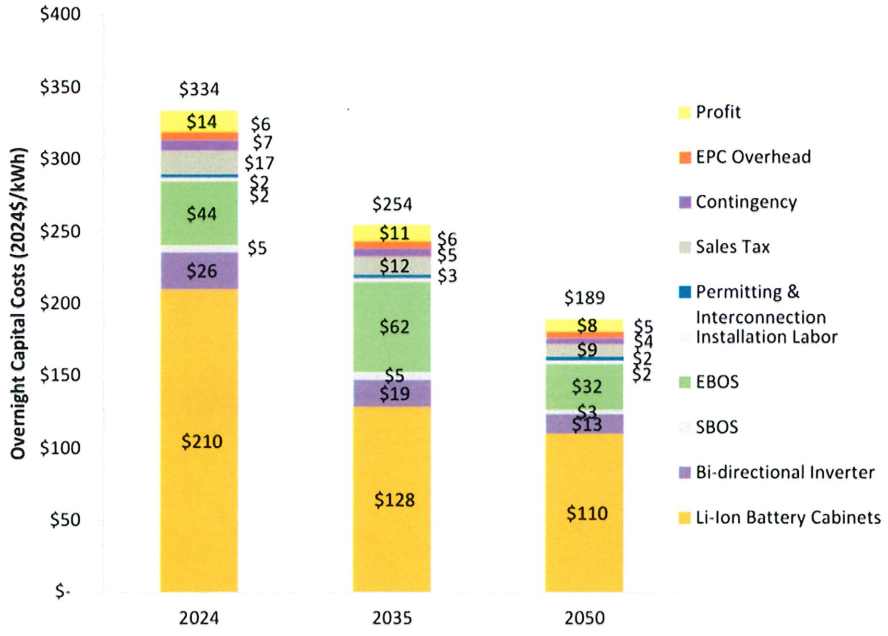

Figure 1. Overnight capital cost estimate of utility-scale batteries by each of the bottom-up cost categories for 2024, 2035, and 2050.

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21 Exhibit C-23, page 27, citing NREL, Cost Projections for Utility-Scale Battery Storage: 2025 Update (June 2025), p. 12: "*The lifetime we selected is 15 years, which is on the lower end of published values. This is a conservative choice, which we make because of the uncertainty in battery lifetimes (existing 4-hour batteries are all new, so no system has yet reached 15 or more years).*"

22 Figure 3 is taken directly from the NREL Study - Figure 1, page 6.

23 Maritime Electric notes that only the SBOS ($5), EBOS ($44), Installation Labour ($2), and Permitting and Interconnection ($2) cost categories shown in Figure 3 would be fully retained during a repowering event. Together, these items represent approximately $53 million of a $334 million installation, or approximately 16 per cent of total project cost. Conversely, 84 per cent of the original project cost is associated with components that would require replacement, repowering, or reinvestment.

Figure 3 demonstrates that future battery repowering is not limited to replacing battery modules alone and may continue to require substantial capital reinvestment. More fundamentally and as previously noted, utility-scale battery systems have not yet been in operation long enough to establish reliable long-term experience regarding battery lifetimes, degradation rates, replacement intervals, and repowering requirements. Maritime Electric therefore submits that long-term battery lifecycle costs remain uncertain and that the assumptions relied upon by Synapse regarding future replacement and repowering costs should be considered cautiously when evaluating the relative economics of alternative resource portfolios.

Energy Arbitrage and Operational Risk

Synapse estimates that a 100 MW, 6-hour BESS could generate approximately $1 million to $2 million annually through energy arbitrage activities.[24]

Maritime Electric does not dispute this conclusion. The Portfolio NPV Study reached a similar conclusion, estimating $1.4 million per year of arbitrage value for a 100 MW, 4-hour BESS.[25] This value has been incorporated directly into the Portfolio NPV Study's economic assessment, including sensitivity analysis of higher-than-expected arbitrage revenues.

The key question is therefore not whether energy arbitrage has value, but whether that value materially alters the relative economics of resource portfolio alternatives. The Portfolio NPV Study demonstrates clearly that it does not.[26] Even after accounting for expected arbitrage revenues, portfolios containing the proposed ProEnergy Opportunity remain among the lowest-cost alternatives evaluated.

In addition, achieving energy arbitrage revenues requires increased battery cycling, which may accelerate degradation and increase future augmentation or replacement requirements. While these effects do not eliminate the value of arbitrage, they reinforce the need to evaluate arbitrage benefits alongside the full lifecycle costs of the resource. Accordingly, Maritime Electric agrees that energy arbitrage provides incremental economic value but submits that this value is not sufficient to materially alter the relative economics of the resource portfolios evaluated in the Portfolio NPV Study.

Interconnection Disruptions, Power Delivery, and System Stability

Synapse states that *"A grid-forming BESS resource provides voltage and stability support and greater support for integration of renewable energy than the CT option because of its operational flexibility and instantaneous response to events."*[27]

Maritime Electric agrees that battery storage can provide important operational and reliability benefits and that modern inverter-based resources are capable of providing some services historically supplied by conventional generation. However, during interconnection disruptions, it is necessary to evaluate not only the ability of a resource to provide energy, but also its ability to support the sustained and stable operation of an isolated electrical system.

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24 Synapse Report, Energy Arbitrage and the Energy Value Premium for a BESS Capacity Alternative Section, pages 31-34.

25 Portfolio NPV Study, Section 4.9, pages 23-25.

26 Refer to the Portfolio NPV Study, Section 5.1, Sensitivity Analysis. For Portfolio 3, which includes 85 MW of BESS, increasing assumed energy arbitrage revenues by 50 per cent (from 25 per cent below expected levels to 25 per cent above expected levels) reduces present value cost from $942 million to $931 million. This represents a decrease of approximately $11 million, equivalent to roughly one per cent of the portfolio's total lifetime net present cost.

27 Synapse Report, page 38.

During partial interconnection disruptions, on-Island resources are relied upon more heavily to support system demand and maintain operating reserves. However, during a full interconnection disruption, on-Island resources must meet 100 per cent of customer demand and maintain the stable operation of the Maritime Electric System, without any support from the mainland grid. Under these conditions, resources must provide not only energy, but also essential reliability services such as voltage support, inertia, and fault current.

From an energy supply perspective, both BESS and combustion turbines can respond to changes in demand. Battery storage can respond almost instantaneously to changing system conditions and provides valuable fast-response capability without the startup requirements associated with combustion turbines. However, battery storage is energy-limited and can sustain output only for a finite period, whereas combustion turbines can operate continuously for extended durations once started and synchronized to the system. This distinction becomes particularly important during extended interconnection outages or other prolonged contingency events.

In addition to supplying energy, isolated system operation requires resources capable of supporting voltage, frequency, and system protection functions. While battery storage can provide many of these services through inverter-based controls, synchronous generation contributes important physical characteristics including rotational inertia and strong fault current contribution that support stable operation during disturbances and enable the effective operation of protection systems. Importantly, the proposed ProEnergy combustion turbines are capable of operating in synchronous condensing mode, allowing them to provide inertia, fault current, and voltage support without generating electricity or consuming fuel.

Accordingly, battery storage and synchronous generation provide different and complementary capabilities. Battery storage is highly effective at providing fast, flexible response and inverter-based grid support services, while combustion turbines provide sustained energy production, rotational inertia, and fault current contribution. The proposed ProEnergy units further enhance these capabilities through synchronous condensing operation, enabling the provision of key system support services even when the units are not generating energy. A reliable solution would benefit from both flexible inverter-based resources and sufficient synchronous generation to maintain dependable operation during normal conditions and during interconnection disruptions.

Clarification of Combustion Turbine and RICE Technology Selection

Synapse indicates that Maritime Electric's preferred resource strategy has evolved from the combination of BESS, reciprocating internal combustion engines ("RICE"), and combustion turbines contemplated in the original Capacity Resource Study and the Company's December 2024 Application.[28]

Maritime Electric notes that this issue was previously addressed in the Company's August 2025 Supplemental Filing, which explained that a time-sensitive opportunity emerged to secure 100 MW of the proposed 150 MW through the ProEnergy Opportunity on an accelerated timeline. The Supplemental filing went on to say *"The Company will continue to pursue the remaining 50 MW from the December 2024 Application"*.[29]

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[28] Synapse Report, page 12 – *"MECL also does not explain why the RICE alternative considered as the primary resource in the Capacity Resource Study and proposed as the majority capacity supply component (90 MW of 150 MW total) in the December 2024 Application is not under consideration at this time."*

[29] Exhibit M-12, Executive Summary, Strategic Justification, page 6.

The Company's current proposal therefore reflects the advancement of a specific opportunity that arose after the December 2024 Application was filed, rather than a reassessment of the long-term role of BESS or RICE technologies. As subsequently explained by the Company, when the Accelerated Capacity Solution became available through NB Power's RIGS Project, Maritime Electric presented that option because it was the most economically viable solution capable of being commissioned before 2030.[30]

This decision should not be interpreted as a determination that BESS or RICE technologies no longer have a role to play in Maritime Electric's future resource mix. As Maritime Electric has previously explained, the ProEnergy Opportunity addresses only a portion of the Company's long-term capacity requirements and, if approved, the Company will continue to assess the most appropriate alternatives to address the remaining capacity needs identified through its resource planning activities. As demonstrated by the E3 Study, additional capacity resources will still be required by 2030, and Maritime Electric expects to continue evaluating battery storage, RICE technologies, and other resources as part of the capacity planning process.

Charlottetown Generating Station Site Constraints

Synapse's analysis treats a 100 MW BESS as a direct substitute for the proposed combustion turbine installation at the Charlottetown Generating Station ("CGS") and does not consider site-specific constraints associated with developing a utility-scale battery facility. Maritime Electric submits that the siting requirements associated with such a utility-scale battery facility, including required setbacks, would significantly constrain the developable area available at the CGS and raise substantial questions regarding the feasibility of accommodating a 100 MW BESS project on the site. Maritime Electric has not identified a feasible arrangement that would allow a facility of this scale to be accommodated within the available space at the CGS while maintaining operational and safety setbacks from adjacent homes, businesses and educational institutions. Accordingly, Maritime Electric expects that a 100 MW BESS would require development at an alternative greenfield site, introducing additional land acquisition, permitting, interconnection, and schedule considerations that are not reflected in the Synapse analysis.

By contrast, the proposed combustion turbine project has undergone site-specific evaluation by ProEnergy, which confirmed that the proposed two-unit configuration can be accommodated at the CGS site. The proposed project would also benefit from access to existing transmission infrastructure and fuel supply arrangements associated with the site.

Context from Synapse's Prior Review of Maritime Electric's Planning

Maritime Electric notes that this is not the first time Synapse has reviewed the Company's resource planning activities. In its 2022 review of Maritime Electric's planning,[31] Synapse emphasized the potential for demand-side management, energy efficiency, and other factors to moderate future load growth and suggested that electricity consumption "could flatten, see a net decline, or maintain an increasing consumption trend,"[32] and suggested that enhanced energy efficiency and demand response could materially reduce peak load growth. These conclusions formed the basis for Synapse's position that certain system investments could be deferred. Subsequent actual system experience has not supported those assumptions.

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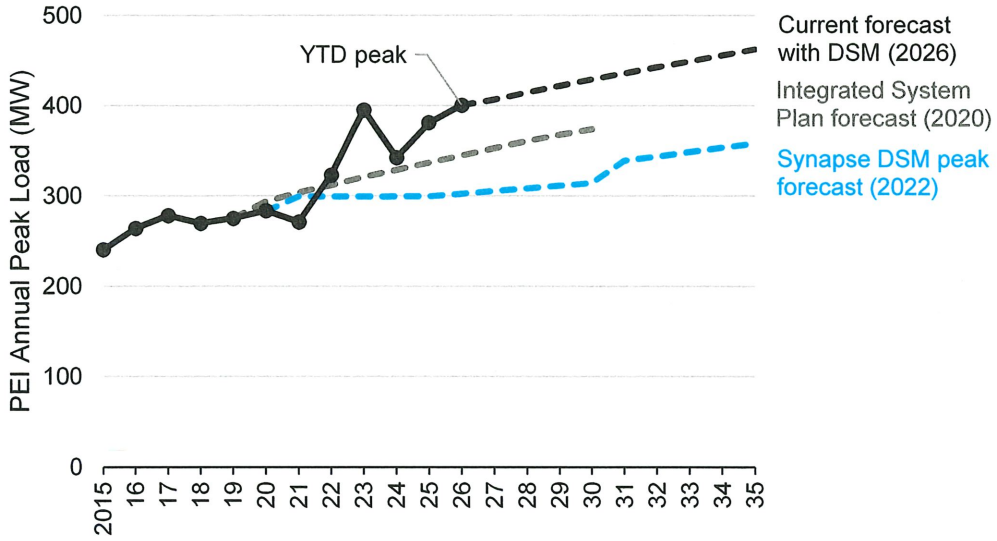
30 Exhibit M-30, response to IR-55(a).

31 Prince Edward Island Resource Planning and Maritime Electric Capital Expenditures – Alternatives to MECL Integrated System Plans and Impact on MECL Capital Expenditures. Prepared for the PEI Regulatory and Appeals Commission, April 27, 2022.

32 Fagan, Bob, Shannon Liburd, and Shelley Kwok. 2022. *Prince Edward Island Resource Planning and Maritime Electric Capital Expenditures*. Synapse Energy Economics, Inc., page 1.

Since that time, actual system conditions have evolved differently than anticipated by Synapse. Peak demand has grown significantly, electrification has accelerated, and Maritime Electric's forecast capacity requirements have increased materially. As illustrated in Figure 4, observed system peaks have exceeded both Synapse's expectations and Maritime Electric's earlier forecasts, reflecting a period of sustained and historically significant load growth.

FIGURE 4
Comparison of Prince Edward Island Peak Load Forecasts



Maritime Electric does not raise this history to suggest that future forecasts are certain. Rather, it highlights the risks associated with relying on generalized assumptions that are not supported by system-specific analysis. In the current Synapse Report, as in Synapse's previous review of Maritime Electric's planning activities, Synapse did not conduct an independent system-specific assessment of the Maritime Electric System. Instead, Synapse again relies on generalized assumptions and findings derived from other jurisdictions and broader policy considerations. Actual system experience has demonstrated that Maritime Electric's load growth, electrification trends, and reliability requirements can differ materially from those assumptions. Accordingly, Maritime Electric submits that resource adequacy decisions should be informed by the best available system-specific evidence and should appropriately recognize the risks associated with deferring capacity additions based on assumptions that may not accurately reflect conditions on the Maritime Electric System.

Sustainability and GHG Emissions Considerations

The Synapse Report places significant emphasis on greenhouse gas ("GHG") emissions and sustainability objectives when evaluating resource alternatives. Maritime Electric acknowledges the importance of reducing GHG emissions and recognizes Federal and Provincial Government's ("Government") broader decarbonization objectives. However, Maritime Electric submits that the primary purpose of this proceeding is to determine whether the proposed capacity addition represents a prudent and reasonable means of maintaining a safe, reliable, and affordable electrical system. Throughout this proceeding, the Company's justification for the proposed project has been grounded in resource adequacy, reliability, and cost-effectiveness considerations, rather than GHG reduction objectives.

That being said, the Accelerated Capacity Solution does support the Province's boader decarbonization objectives by supporting customers electrification endeavours. Reliability is a critical part of the foundation for electrification. If customers do not have confidence that the electrical system can reliably serve peak demand and contingency conditions, they will be less likely to electrify home heating, transportation, and other end uses currently served by fossil fuels. Continued reliance on fuel oil for space heating and petroleum fuels for transportation would make it significantly more difficult for Government to achieve its broader GHG emissions reduction objectives.

Affordability is also central to electrification. The E3 Study and accompanying Portfolio NPV Study demonstrate that reliable system operation requires additional firm capacity and that portfolios containing the proposed ProEnergy Opportunity consistently rank among the lowest-cost alternatives evaluated. Keeping electricity rates as low as possible is in itself an important component of electrification policy, as high electricity costs may discourage customers from adopting electric heating technologies, electric vehicles, and other electricity-based low-carbon alternatives. Maritime Electric therefore submits that, while resource planning inevitably involves balancing reliability, affordability, and sustainability objectives, decisions that compromise reliability or materially increase costs may ultimately hinder electrification and the achievement of long-term emissions reduction goals.

Maritime Electric further notes that the Provincial Government's latest Energy Strategy expressly recognizes that electricity supply must remain reliable during periods of peak demand and supports the installation of dispatchable generation resources on Prince Edward Island.[33] In addition, the proposed ProEnergy Opportunity will support the integration of additional renewable energy resources by providing dispatchable capacity, synchronous condensing capability, and other system support services necessary to maintain reliable operation of the electrical system.[34]

Conclusion

Maritime Electric agrees with Synapse that the Company faces a near-term capacity deficit and that additional on-Island capacity is required to maintain reliable electric service. The principal difference between the parties is not whether capacity is required, but the amount of dependable capacity that can reasonably be attributed to BESS under Maritime Electric System conditions.

Since the Synapse Report was filed, Maritime Electric has submitted the E3 Study and accompanying Portfolio NPV Study, which directly addresses many of the assumptions underlying Synapse's analysis through system-specific modelling of the Maritime Electric System. Those studies demonstrate that the dependable capacity contribution of battery storage is materially lower than assumed by Synapse and that portfolios containing the proposed ProEnergy Opportunity consistently rank among the lowest-cost alternatives capable of satisfying Maritime Electric's reliability requirements.

The evidence therefore supports the Company's position: additional firm capacity is required, the proposed ProEnergy Opportunity represents the most cost-effective near-term solution identified, and timely action is necessary to preserve system reliability. Maritime Electric submits that

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33 PEI Energy Strategy, Dunsky Energy + Climate Advisors, August 2025: https://www.princeedwardisland.ca/sites/default/files/fe81/PEIEnergyStrategy.pdf which states - "*Recognizing that electricity supply, even in times of peak demand, must be reliable, the government supports the installation of dispatchable generators on the Island. These units would not be expected to provide baseload energy, but would instead provide security of supply in times of high demand or reduced supply from clean resources.*"

34 Exhibit M-30, response to IR-71.

reliability decisions should be based on system-specific evidence rather than generalized assumptions derived from other jurisdictions or broader policy considerations.

Maintaining a reliable and affordable electrical system is also a prerequisite for continued electrification of heating, transportation, and other end uses, which represents one of Government's most significant pathways toward long-term GHG emissions reductions.

Accordingly, Maritime Electric submits that the proposed ProEnergy Opportunity should proceed as the first phase of a broader capacity expansion program. Maritime Electric will continue evaluating battery storage, RICE technologies, and other resource options to address the Company's remaining capacity needs, including those required due to future resource retirements (i.e., CT1 and CT2).

Yours truly,

MARITIME ELECTRIC

Michelle Francis
Vice-President, Finance & Chief Financial Officer

MF32
Enclosure