All our energy.
All the time.

MARITIME ELECTRIC
A FORTIS COMPANY

October 23, 2026



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

Dear Ms. Bradley:

Response to Interrogatories from Commission Staff
Electricity Efficiency & Conservation Plan Funding and Demand Response (UE11401)

Please find attached Maritime Electric Company, Limited's ("Maritime Electric") responses to interrogatories from Commission Staff (Exhibit C-2) and the associated Demand Reduction Measures Report, as requested, with respect to the Electricity Efficiency & Conservation Plan Funding and Demand Response Docket.

Consistent with the Commission's direction in Exhibit C-2, the names of interruptible customers in the Demand Reduction Measures Report have been redacted. Interruptible customer load data has also been redacted. An unredacted copy will be provided to the Commission.

Yours truly,

MARITIME ELECTRIC

Michelle Francis
Vice President, Finance &
Chief Financial Officer

MF47
Enclosure

180 Kent Street • PO Box 1328 • Charlottetown, PE C1A 7N2
telephone 1-800-670-1012 • **fax** 902-629-3665 • **maritimeelectric.com**

MARITIME ELECTRIC
A FORTIS COMPANY
All our energy. All the time.

INTERROGATORIES FROM COMMISSION STAFF

Electricity Efficiency & Conservation Plan Funding and Demand Response UE11401

filed October 23, 2026

MARITIME ELECTRIC
A FORTIS COMPANY
All our energy.
All the time.

AFFIDAVIT

CANADA

PROVINCE OF PRINCE EDWARD ISLAND

BEFORE THE ISLAND REGULATORY AND APPEALS COMMISSION

IN THE MATTER of the *Electric Power Act* (R.S.P.E.I. 1988, Cap. E-4) and **IN THE MATTER** of Docket UE11401 – Electricity Efficiency & Conservation Plan Funding and Demand Response.

AFFIDAVIT

I, T. Michelle Francis, of Emyvale, in Queens County, Province of Prince Edward Island, MAKE OATH AND SAY AS FOLLOWS:

1. I am the Vice President, Finance and Chief Financial Officer for Maritime Electric Company, Limited and as such have personal knowledge of the matters deposed to herein, except where noted, in which case I rely upon the information of others and in which case I verily believe such information to be true.

2. I prepared or supervised the preparation of the attached Interrogatory responses and to the best of my knowledge and belief the responses are true in substance and in fact.

SWORN TO at Charlottetown,
Prince Edward Island, the 23rd
day of October, 2026.

A Commission for taking affidavits in the
Supreme Court of Prince Edward Island

T. Michelle Francis

MARITIME ELECTRIC
A FORTIS COMPANY
All our energy.
All the time.

INTERROGATORIES

The Island Regulatory and Appeals Commission (the "Commission") will be opening a docket to examine the electricity efficiency and demand-side management programming being delivered by Maritime Electric Company, Limited ("Maritime Electric" or "MECL") and requests responses to the following interrogatories:

Prince Edward Island Energy Corporation's ("PEIEC") Electricity Efficiency & Conservation Plan ("EE&C Plan"):

IR-1 The total amount collected from customers in respect of the EE&C Plan on and after March 1, 2026, to the most recent month available, including a monthly breakdown.

Response:

The total amount collected from customers in respect of the EE&C Plan on and after March 1, 2026, to the most recent month available, including a monthly breakdown is provided in Table 1.

TABLE 1
EE&C Plan Monthly Breakdown Since March 2026

Month	Sales (kWh)	Rate ($/kWh)	Collected from Customers ($)	Remitted to PEIEC ($)	Balance Under (Over) Collected ($)
February	-	-	$ -	$ -	$ 177,786
March	151,592,179	0.00121	(183,427)	72,357	66,716
April	147,539,952	0.00121	(178,523)	-	(111,807)
May	126,189,269	0.00121	(152,689)	-	(264,496)
June	112,460,127	0.00121	(136,077)	-	(400,573)
July	111,667,526	0.00121	(135,118)	-	(535,691)
August	124,238,585	0.00121	(150,329)	-	(686,019)
September	118,188,625	0.00121	(143,008)	-	(829,028)
TOTAL	**891,876,263**	**0.00121**	**$ (1,079,170)**	**$ 72,357**	**$ (829,028)**

.

IR-2 The current balance of the separate account used to record EE&C Plan over-or-under collections.

Response:

As noted in Table 1 in the response to IR-1, the balance in the account recording EE&C Plan over or-under collections is an over collection from customers of $829,028.

IR-3 The amount, if any, collected since March 1, 2026 that has been remitted to the Prince Edward Island Energy Corporation.

Response:

There have been no amounts collected since March 1, 2026, remitted to the Prince Edward Island Energy Corporation ("PEIEC"). The payment in March 2026 reflected in Table 1 in the response to IR-1 was for February 2026 collections.

IR-4 MECL's proposed treatment of amounts collected from customers following the expiry of the EE&C Plan.

Response:

As directed by the Commission by email in March 2026 all amounts collected from customers following the expiry of the EE&C Plan on February 28, 2026 have been set aside in a separate account as detailed in Table 1 in the response to IR-1 and will be held until further directed by the Commission.

MARITIME ELECTRIC
A FORTIS COMPANY
All our energy.
All the time.

DEMAND REDUCTION MEASURES REPORT

All our energy.
All the time.

MARITIME ELECTRIC
A FORTIS COMPANY

MARITIME ELECTRIC COMPANY, LIMITED

DEMAND REDUCTION MEASURES REPORT – DOCKET UE11401

October 23, 2026

TABLE OF CONTENTS

1.0 EXECUTIVE SUMMARY 1

2.0 BACKGROUND 6
2.1 Defining Demand Reduction Measures 7
2.2 History of Electricity Efficiency and Conservation Plans 9
2.3 Effective Load Carrying Capability 10

3.0 ASSESSMENT OF DEMAND REDUCTION MEASURES 11
3.1 Interruptible Customers 11
3.2 Demand Response 16
3.3 Time-Varying Pricing 22
3.4 Voluntary Customer Conservation 27
3.5 Preliminary Implementation Timeline 27

4.0 PLANNING CONSIDERATIONS 29
4.1 Resource Adequacy 30
4.2 Interactions with Energy Storage 32
4.3 Coordination with PEIEC 33

5.0 CONCLUSION 34

TABLE OF ABBREVIATIONS

Abbreviation	Name
AMI Project	Advanced Metering for Sustainable Electrification Project
BESS	battery energy storage system
CIS	Customer Information System
Commission	Prince Edward Island Regulatory and Appeals Commission
Company	Maritime Electric Company, Limited
CPP	critical peak pricing
DR	demand response
DSM	demand-side management
Dunsky Study	*Prince Edward Island Energy Efficiency Potential Stu*dy prepared by Dunsky Energy + Climate Advisors
EV	electric vehicle
E3 Study	*Maritime Electric Resource Adequacy Study* prepared by Energy and Environmental Economics, Inc.
EE&C Plan	Electricity Efficiency and Conservation Plan
ELCC	effective load carrying capability
IESO Nova Scotia	Independent Energy System Operator for Nova Scotia
kVA	kilovolt-ampere(s)
kW	kilowatt(s)
LOLE	loss-of-load expectation
Maritime Electric	Maritime Electric Company, Limited
MW	megawatt(s)
NB Power	New Brunswick Power Corporation
NS Power	Nova Scotia Power Incorporated
PEI	Prince Edward Island
PEIEC	Prince Edward Island Energy Corporation
TOU	time-of-use
TVP	time-varying pricing
TVP Pilot Report	*Time-Varying Pricing Pilot Program Phase 4 Report* prepared by Nova Scotia Power Incorporated

1.0 EXECUTIVE SUMMARY

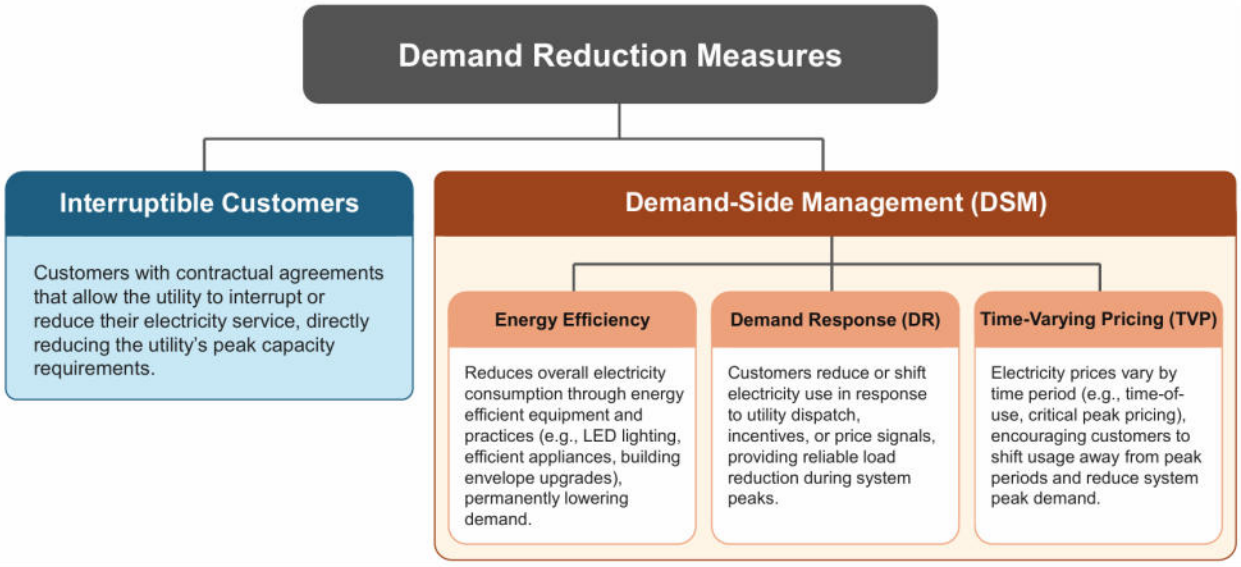
Maritime Electric Company, Limited ("Maritime Electric" or the "Company") prepared this Demand Reduction Measures Report ("Report") in response to the Prince Edward Island Regulatory and Appeals Commission's (the "Commission") September 25, 2026, request under Docket UE11401. This Report assesses existing demand reduction resources, opportunities for expansion, indicative demand reduction potential, implementation requirements and coordination with the Prince Edward Island Energy Corporation ("PEIEC"). Given the relatively short period of time to prepare this Report, the assessment is primarily qualitative, supported by available Company data, third-party studies and previously filed evidence.

Demand reduction measures can contribute to meeting electrical system needs, but their potential, readiness, and dependable capacity value differ materially. This Report distinguishes individual interruptible customer service arrangements from broader demand-side management ("DSM") programs, including demand response ("DR") and time-varying pricing ("TVP"), as illustrated in Figure 1.

For the purposes of this Report, interruptible customers are large commercial or industrial customers whose individual service agreements permit Maritime Electric to interrupt or reduce their electricity supply when generating capacity is insufficient, in exchange for a monthly demand credit. Energy efficiency measures reduce the electricity required to provide a service, such as space heating, water heating or lighting, thereby lowering overall energy consumption and, in some cases, peak demand. DR programs reduce or shift electricity consumption during periods of high system demand through direct equipment control, automated response or curtailment of customer load. TVP uses price signals, through rates that vary by time of day or system conditions, to encourage customers to shift consumption from higher-cost or peak-demand periods to lower-cost or off-peak periods.

Energy efficiency savings are already incorporated into Maritime Electric's energy and peak demand forecasts and are therefore not assessed further. The principal findings concern the limited scope for additional interruptible service, the need to implement and verify DR programs, and the longer-term requirements for TVP.

FIGURE 1
Demand Reduction Measures Hierarchy



Maritime Electric currently has four interruptible customers with a combined planning value of 14 megawatts ("MW"). Their service agreements generally require load curtailment within ten minutes of notification when generating capacity is insufficient. A review of other large customers identified six potentially suitable additional participants with up to 5 MW of combined demand coincident with the January 30, 2025, system peak. This represents technical potential rather than committed participation. Actual expansion will depend on customer operations, equipment requirements, willingness to participate and approved service terms. The Company is prepared to discuss participation with these customers and support PEIEC's proposed interruptible customer pilot, subject to Commission oversight and approval, if required.

PEIEC's latest Electricity Efficiency and Conservation Plan ("EE&C Plan"), covering March 1, 2023, to February 28, 2026, targeted 20.5 MW of DR through energy storage, curtailment and interruptible initiatives, and load control. However, the proposed DR programs are not operational, and the pilot remains paused. Approximately $968,400 of the approved DR budget was attributable to Maritime Electric customers. The Company has not received the detailed expenditure and evaluation information needed to determine if or how that amount was used. This experience underscores the importance of implementation reporting, verified results and clear responsibilities when incorporating demand-side resources into system planning.

The *Prince Edward Island Energy Efficiency Potential Study* prepared by Dunsky Energy + Climate Advisors (the "Dunsky Study") underlying PEIEC's DR initiatives estimated achievable DR potential of 20.6 MW by 2030. The study identified Prince Edward Island's ("PEI") relatively flat daily load profile as the principal constraint. Although electricity demand has grown, electrification of space heating has increased demand across the day without materially changing the shape of peak-day load profiles. A new EE&C Plan targeting approximately 20.5 MW could therefore seek to capture essentially all of the achievable DR potential identified in that study. Separate programs should not duplicate initiatives already funded by customers or assume additional potential without accounting for overlapping opportunities. Maritime Electric understands that PEIEC intends to file its next EE&C Plan by March 31, 2027.

TVP offers a further opportunity to influence consumption, but the available evidence indicates modest potential under voluntary participation assumptions. Applying Nova Scotia Power Incorporated's ("NS Power") TVP pilot results to Maritime Electric's Residential and General Service customers, with an assumed 10 per cent opt-in participation rate, produces indicative evening demand reductions of approximately 1.8 MW for time-of-use ("TOU") rates or 6.0 MW for critical peak pricing ("CPP"). The Dunsky Study's higher TOU estimate of 10.7 MW by 2030 assumed default enrolment with an opt-out option and a 3:1 peak-to-off-peak price ratio. Those assumptions may not reflect a voluntary program or an appropriate cost-based rate design for Maritime Electric.

TVP cannot be implemented before completion of the Company's Advanced Metering for Sustainable Electrification Project ("AMI Project"), expected in the second quarter of 2028. The project includes advanced meters and a new Customer Information System ("CIS") with the necessary interval data and billing capabilities. Implementation also requires rate design, Commission approval, customer education and, preferably, a pilot to establish local customer response, bill impacts and system value. Maritime Electric intends to examine TVP through Rate Design Stage 2. This Report's broader implementation timeline is preliminary and conditional on adequate resources, coordination and regulatory approvals; it does not establish implementation commitments or approved targets.

Voluntary customer conservation remains available as a short-term operational measure during system stress. Maritime Electric estimates that conservation requests in January and February 2025 produced demand reductions ranging from 0 to 10 MW, although the response cannot be isolated precisely from weather and other load variations. The Company's Grid Status Index, Current System Load graphic and conservation communications support customer engagement. However, uncertain response and the potential for reduced participation with frequent or prolonged requests dictate that voluntary conservation should not be treated as firm capacity for resource adequacy planning.

The demand reduction achieved by a program is not necessarily equal to its dependable capacity contribution. Effective load carrying capability ("ELCC") depends on availability during critical periods, response duration, annual call limits, customer performance, rebound and interactions with other resources. The *Maritime Electric Resource Adequacy Study* prepared by Energy and Environmental Economics, Inc. (the "E3 Study") illustrates this distinction: modelled programs with 10 MW of DR provided between 2.8 MW and 9.5 MW of ELCC, depending on program design. Unless otherwise stated, the demand reduction values in this Report are installed-capacity values, not ELCC values.

DR, TVP and battery energy storage systems ("BESS") must also be assessed together because they may target the same peak periods and load-shifting opportunities. This Report's February 4, 2023, example shows a theoretical 32 MW peak reduction from fully levelizing that day's load profile using a BESS, assuming perfect forecasting of hourly loads. Once the profile is levelized, no further peak-to-off-peak shifting opportunity remains within the relevant period. A comprehensive portfolio study is therefore required to quantify combined benefits and avoid overstating capacity value by adding standalone estimates.

Advancing demand reduction requires coordinated action in three areas: governance, planning information and operational arrangements. PEIEC's responsibility for developing and administering EE&C Plans and Maritime Electric's responsibility for system planning and operation should be clearly defined. The Company requires timely access to program forecasts, implementation status, participation, measured reductions, costs and evaluation results. Practical arrangements must also address customer recruitment and consent, interval data access, event

dispatch, measurement and verification, and reporting. Maritime Electric is prepared to support achievable, measurable initiatives aligned with electrical system needs, subject to privacy requirements and Commission approval, if required. The path forward is to pursue suitable interruptible service opportunities, coordinate DR development through the next EE&C Plan, examine TVP through rate design, and establish the combined capacity value of demand reduction measures and BESSs before relying on those resources for planning.

2.0 BACKGROUND

On September 25, 2026, the Commission issued a letter advising Maritime Electric that the Commission is opening Docket UE11401 to examine energy efficiency and DSM programming being delivered by both PEIEC and Maritime Electric.[1] On the same date, the Commission issued interrogatories to Maritime Electric, which included a request for the Company to file a report addressing DR and related matters.[2] This Report is provided in response to the Commission's request.

The Commission requested that the Report address the following (which is paraphrased from Exhibit C-2):

- The DR resources currently available to Maritime Electric, including interruptible customers and any other controllable or curtailable load;
- Maritime Electric's current ability to call on these resources during peak system conditions;
- Opportunities to expand interruptible service or other customer curtailment arrangements;
- Other DR measures Maritime Electric has considered or could reasonably implement over the next several years, including load control, time-based programs, voluntary curtailment or other measures;
- The estimated DR that could reasonably be achieved from each identified measure;
- The anticipated timing, costs and customer impacts associated with implementation; and
- How Maritime Electric intends to coordinate its DR activities with PEIEC and the development of the next EE&C Plan.

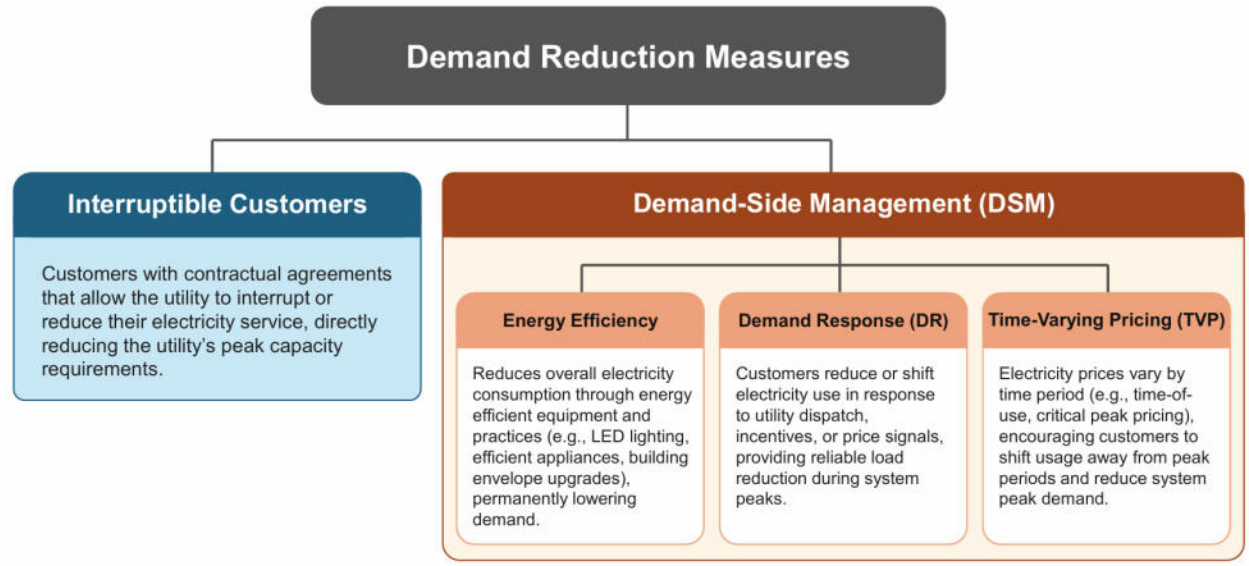
Given the relatively short period of time available to prepare this Report, the assessment is primarily qualitative but incorporates available quantitative information from Maritime Electric's records, third-party studies, and previously filed reports.

1 Exhibit C-1.
2 Exhibit C-2.

2.1 Defining Demand Reduction Measures

This section and Sections 2.2 and 2.3 include information adapted from Maritime Electric's response to Commission Staff IR-93(d) in Docket UE20742.[3] For this Report, Maritime Electric categorizes demand reduction measures as shown in Figure 2. Although industry terminology and classifications vary, the categories used in this Report are generally consistent with industry practice.

FIGURE 2
Demand Reduction Measures Hierarchy



Interruptible Customers

Interruptible customers are large commercial or industrial customers whose service agreements permit Maritime Electric to interrupt or reduce their electricity supply. In return, participating customers receive a monthly demand credit.

Interruptible service is considered separately from DSM in this Report. Although interruptible load may fall within broader definitions of DR, Maritime Electric's interruptible customers have individual contractual arrangements that directly reduce the Company's capacity requirement for resource adequacy planning. Interruptible service is intended to be called infrequently when a

[3] Exhibit M-33.

generator outage or other energy supply contingency creates insufficient capacity to meet demand. By comparison, DSM measures generally consist of programs, technologies or rate structures offered to groups of customers to influence electricity consumption on an ongoing basis and may contribute capacity value for resource adequacy purposes.

Curtailing existing interruptible load does not further reduce the Company's firm capacity requirement, because that load is already excluded from firm load for resource adequacy planning.

Energy Efficiency

Energy efficiency measures reduce the electricity required to provide a service, such as space heating, water heating, lighting or appliance use. These measures reduce overall energy consumption and may also reduce peak demand where the affected end use contributes to the system peak. Examples promoted through efficiencyPEI include LED lighting, energy efficient appliances, building envelope retrofits and other efficiency upgrades included in PEIEC's latest EE&C Plan.[4]

Maritime Electric incorporates forecast energy savings and peak demand reductions from energy efficiency measures into its energy and peak demand forecasts, respectively. Because those savings and reductions are already reflected in the forecasts, energy efficiency measures are not assessed further in this Report.

Demand Response

DR programs reduce or shift electricity consumption during periods of high system demand through direct equipment control, automated response or curtailment of customer load. Unlike energy efficiency, which reduces overall energy use, DR primarily changes the amount or timing of consumption during specified periods. Examples include controllable water heaters, smart thermostats, dual-fuel heating, customer-owned energy storage, electric vehicle ("EV") charging controls and behind-the-meter generation.

[4] efficiencyPEI is the service agency for PEIEC's EE&C Plan.

PEIEC's latest EE&C Plan included a target of 20.5 MW, beginning with proposed DR pilots involving customer-owned energy storage, interruptible rates and curtailment, dual-fuel systems and demand load control.

Time-Varying Pricing

TVP uses price signals to encourage customers to shift consumption from higher-cost or on-peak periods to lower-cost or off-peak periods. Unlike directly controlled DR programs, TVP relies on customers responding to price incentives. Examples include TOU rates, CPP and other rate structures that differentiate prices by time or system conditions.

Maritime Electric's AMI Project, approved by the Commission in October 2024, will provide the interval consumption data and billing capabilities required to consider TVP programs.[5]

2.2 History of Electricity Efficiency and Conservation Plans

In December 2013, amendments to the PEI *Electric Power Act* assigned responsibility for DSM initiatives to public utilities. At the time, PEIEC was not defined as a public utility under the *Act*. On June 3, 2015, Maritime Electric applied to the Commission for approval of an *Efficiency and Demand Side Management Plan* covering 2015 to 2020.[6] The Commission largely denied the proposed plan, including its DR measures, through Order UE15-02 dated November 3, 2015.

In September 2015, the Province released the *Prince Edward Island Provincial Energy Strategy 2016/17*, which proposed establishing an independent energy efficiency utility to administer provincial DSM initiatives. Amendments made to the *Electric Power Act* in December 2017 subsequently deemed PEIEC to be a public utility for DSM purposes. The amendments were intended to assign responsibility for DSM programming to PEIEC through efficiencyPEI.

PEIEC has since submitted two EE&C Plans for Commission approval. The first, submitted on June 29, 2018, and approved on May 17, 2019, focused on energy efficiency programs for the years 2018 through 2021.[7]

5 Docket UE20745.
6 Docket UE21406.
7 Docket UE41400.

The second plan was submitted on December 31, 2021, and approved on April 23, 2024.[8] It covered the period from March 1, 2023, to February 28, 2026, and included both energy efficiency and DR initiatives. The proposed DR initiatives included customer-owned energy storage, customer curtailment and load control programs, with a combined forecast peak reduction of 20.5 MW by 2026. Maritime Electric incorporated that forecast reduction into its capacity forecasts. However, no DR programs proposed under the plan are currently operational.

A portion of the funding for these EE&C Plans was provided by Maritime Electric's customers through a rate rider.

2.3 Effective Load Carrying Capability

DR and TVP can contribute to resource adequacy by reducing or shifting load during hours when the electrical system is most at risk of being unable to meet demand. However, the capacity contribution of a measure is not necessarily equal to its maximum or installed demand reduction capability.

Capacity value depends on factors such as availability during critical periods, response duration, annual call limits, customer participation and performance, load recovery or rebound, and interactions with other resources. The ELCC of DR and TVP must therefore be determined through probabilistic resource adequacy analysis using a loss-of-load expectation ("LOLE") criterion.[9] Portfolio analysis is also required to account for interactions among DR, TVP, BESSs and other capacity resources.

Unless otherwise stated, the demand reduction values in this Report are installed capacity values. They should not be interpreted as ELCC values or equivalent firm capacity for resource adequacy planning. The capacity contribution of DR and TVP for resource adequacy purposes may therefore be lower than the installed-capacity values presented in this Report.

8 Docket UE41401.
9 Refer to Docket UE20742, Exhibit M-30, IR-23 – Attachment 1, 2026 Maritime Electric Resource Adequacy Study for more information about resource adequacy, LOLE and ELCC.

3.0 ASSESSMENT OF DEMAND REDUCTION MEASURES

This section assesses the current status, indicative potential, considerations, principal constraints and implementation implications of interruptible service, DR and TVP. It also discusses voluntary customer conservation as a short-term operational measure. Section 3.5 presents a preliminary implementation timeline based on the assumption that required planning, coordination and regulatory activities proceed without material delay.

3.1 Interruptible Customers

Maritime Electric currently uses 14 MW of interruptible load for resource adequacy planning. Up to 5 MW of additional coincident load may be technically suitable for interruptible service, although customer interest may be a significant constraint.

Current Status

Maritime Electric currently has four interruptible customers with a combined planning value of 14 MW. Each customer has a separate service agreement requiring them to curtail their load, generally within ten minutes of being notified by Maritime Electric, if required due to a shortage of generating capacity.[10]

Table 1 summarizes 2025 demand data for the four customers. Their non-coincident maximum monthly demands totalled 19,989 kilowatts ("kW"), with each customer's maximum occurring during the summer. Their combined coincident demand during Maritime Electric's 2025 system peak – from 6 p.m. to 7 p.m. on January 30, 2025 – was 15,594 kW. Because customer demand varies by time and operating conditions, Maritime Electric uses 14 MW of interruptible load for resource adequacy planning.[11]

[10] The existing interruptible service agreements are continuations of legacy agreements from the 1980s. Any new interruptible service agreements or interruptible service rates would require Commission approval.

[11] 14 MW = 14,000 kW.

TABLE 1 Maritime Electric Interruptible Customer Demand Data			
Interruptible Customer Name	Maximum Monthly Demand, 2025 (kW) A	Month of Maximum Demand B	Real-Time Demand During 2025 Peak (kW) C
[redacted]	[redacted]	June	[redacted]
		August	
		August	
		August	
Total	**19,989**		**15,594**
Total used for resource adequacy planning			**14,000**

Potential

Interruptible service requires an executed service agreement and equipment capable of reducing load within the required response time. These arrangements are generally most suitable for large customers for which the demand credit and capacity value justify the equipment and administrative costs. Small- and medium-sized customers are more likely to be suitable for broader DR programs.

To assess potential expansion, Maritime Electric reviewed February 2025 billing demand for General Service, Small Industrial and Large Industrial customers with demand meters.[12] Customers were grouped into the five demand cohorts shown in Table 2. The table identifies the number of existing interruptible and non-interruptible customers in each cohort.

[12] Maritime Electric's annual system peak for 2025 occurred on January 30. Evaluating demand from the February 2025 billing month is appropriate because for most customers, their load on January 30 is included in the February meter reading and billing cycle. Residential customers are typically small and do not currently have meters capable of measuring demand.

TABLE 2 February 2025 Maximum Monthly Demand Customer Counts General Service, Small Industrial and Large Industrial Customers with Demand Meters[13]			
Cohort	Maximum Demand[14] (kW)	Number of Customers	
		Existing Interruptible	Non-Interruptible
Cohort 1	0 to 100	0	2,189
Cohort 2	100 to 500	2	170
Cohort 3	500 to 2,000	1	9
Cohort 4	2,000 to 10,000	0	2
Cohort 5	10,000 to 25,000	1	0
	Total	**4**	**2,370**

Customers in Cohorts 1 and 2 are generally too small to justify individual interruptible service arrangements and would likely be better served through DR programs. This is consistent with the Commission's 1987 decision that, to be eligible for interruptible service, a customer should have a monthly peak demand of at least 500 kilovolt-amperes ("kVA") during the year.[15] The two existing interruptible customers in Cohort 2 are legacy participants and have significantly higher demands during the summer.

Cohort 3 includes one existing interruptible customer and nine non-interruptible customers. Two of the non-interruptible customers provide essential services and are unlikely to be suitable. Two are grocery stores that may be better suited to a DR program.[16] The remaining five may be suitable for interruptible service, depending on their operations and interest.

Cohort 4 includes two non-interruptible customers. One previously received interruptible service but discontinued it because of its service requirements and operating preferences. The other may be suitable for interruptible service, depending on its operations and interest.

---

13 One customer served under the residential rate as a "farm" has been included in Cohort 4 in the table for completeness.

14 Maximum demand represents the maximum load of the customer during the month, regardless of the time that the maximum demand occurred; the maximum demand of each customer is not necessarily coincident with Maritime Electric's system peak load.

15 kVA is approximately equal to kW.

16 Grocery stores are retail businesses that are likely not interested in being an interruptible customer. If the grocery stores have backup generators with automatic start capabilities, they may be a good fit for a demand response program.

Cohort 5 includes one customer, which already receives interruptible service.

The six potentially suitable customers – one in Cohort 4 and five in Cohort 3 – had combined non-coincident maximum demand of 9,622 kW in the February 2025 billing month. Because these individual maximums did not necessarily occur at the system peak, this value overstates their potential contribution to peak reduction. Their combined demand during Maritime Electric's January 30, 2025, system peak was 5,082 kW. Accordingly, up to 5 MW of coincident load may be technically suitable for additional interruptible service, subject to customer-specific assessment and participation.[17]

Maritime Electric's existing interruptible load is generally consistent with that of neighbouring jurisdictions. Table 3 compares Maritime Electric's interruptible load with forecasts reported by the Independent Energy System Operator for Nova Scotia ("IESO Nova Scotia") in its *2026 10-Year System Outlook Report*[18] and by New Brunswick Power Corporation ("NB Power") in its March 18, 2024, *Resource Adequacy Report*.[19] Maritime Electric's interruptible load represents 3.8 per cent of peak demand, compared with 5.2 to 5.5 per cent for IESO Nova Scotia and 3.4 per cent for NB Power.

[17] 5 MW = 5,000 kW.

[18] The IESO Nova Scotia 2026 10-Year System Outlook Report is available at the following link: https://www.ieso-ns.ca/wp-content/uploads/2026/09/20260628-IESO-NS-2026-10-Year-System-Outlook.pdf Interruptible load data is provided in Table 4, page 18.

[19] The NB Power March 18, 2024, Resource Adequacy Report was provided is found in New Brunswick Energy and Utilities Board Docket EL-002-2025, Exhibit NBP6.07. Interruptible load data is provided in Table 1, page 6.

TABLE 3 Comparison of Interruptible Customer Load with Neighbouring Jurisdictions			
	Interruptible Customer Load (MW)	**Peak Load (MW)**	**Interruptible Customer Load as Percentage of Peak Load (%)**
	A	**B**	**C = A / B**
Maritime Electric current	14	364	3.8%
IESO Nova Scotia 2026/2027 forecast	129	2,497	5.2%
IESO Nova Scotia 2029/2030 forecast	142	2,563	5.5%
NB Power 2026 forecast	110	3,224	3.4%
NB Power 2030 forecast	110	3,250	3.4%

Limitations

Maritime Electric has relatively few large customers that may be suitable for interruptible service. Up to 5 MW of coincident load may be technically suitable, and the Company is prepared to discuss participation with the identified customers. Actual potential will depend on customer operations, required equipment, willingness to participate and the terms available. Interest may also be limited at this time due to the elevated likelihood of capacity shortages and until Maritime Electric's capacity deficit is addressed.

Maritime Electric does not currently have an approved interruptible service rate. Its four existing participants receive service under legacy agreements. Although the Company could negotiate customer-specific agreements and seek Commission approval, an approved interruptible service rate would provide a more transparent and efficient framework for participation and customer credits. For example, NS Power's Large Industrial Tariff includes an Interruptible Rider that reduces the demand charge for qualifying customers, which is approved by the Nova Scotia Energy Board.[20]

[20] The NS Power Tariffs (May 2026) can be found at the following link: https://www.nspower.ca/docs/default-source/regulatory/tariff-book-2026.pdf?sfvrsn=69ab1a05_4. The Interruptible Rider (Rate Code 25) is defined on page 4 of the Large Industrial Tariff.

PEIEC Pilot

Maritime Electric was recently informed by PEIEC that it intends to propose an interruptible customer pilot program as a near-term demand reduction measure. The Company is committed to supporting PEIEC's pilot, subject to Commission oversight and approval, if required.

3.2 Demand Response

DR may provide meaningful demand reduction, but implementation depends on coordinated program development, verified results and clarity regarding the respective roles of PEIEC and Maritime Electric.

Current Status – PEIEC EE&C Plan

PEIEC's latest EE&C Plan covered the three-year period from March 1, 2023, to February 28, 2026.[21] It included the following energy efficiency programs:

- Energy efficiency equipment rebates;
- Home comfort;
- Home insulation rebates;
- Instant energy savings;
- New home construction;
- Winter warming;
- Business energy rebates; and
- Community energy solutions.

The plan established energy and demand savings targets of 34.45 gigawatt-hours and 16.85 MW, respectively, from energy efficiency programs. Separately, the plan also targeted 20.5 MW of DR, comprising:

- 2.59 MW from energy storage;
- 10.30 MW from curtailment and interruptible initiatives; and
- 7.61 MW from load control.[22]

[21] Docket UE41401, Order UE24-02.
[22] Docket UE41401, Exhibit E-9(d), Table 16 (page 29) total of energy storage, curtailment & interruptible and load control.

The plan also proposed a DR pilot comprising:

- Electric thermal storage systems for the residential sector;
- Interruptible rates and curtailment for the commercial and industrial sectors;
- Dual fuel systems for the residential and commercial sectors; and
- Demand load control systems for the residential and commercial sectors, including Wi-Fi thermostats and storage water heater systems.

Order UE24-02 requires PEIEC to submit quarterly progress reports and annual results to the Commission. Maritime Electric has not received those reports and therefore has not independently assessed actual program performance. In the absence of verified results, the Company uses the forecast energy and demand savings from the approved plan in its annual energy sales and peak demand forecasts.

Under Order UE24-04, Maritime Electric was directed to collect and remit $868,283 annually to PEIEC, or $2,604,848 over the plan term after accounting for previous overcollections of $1,809,091.[23] In total, Maritime Electric ratepayers funded $4,413,939, or 18 per cent, of the plan's total approved cost.[24]

The approved budget included $5.38 million for DR initiatives. Applying Maritime Electric's 18 per cent funding share, approximately $968,400 of the DR budget was attributable to Maritime Electric customers. Table 4 summarizes the approved plan budget and Maritime Electric's contribution.

TABLE 4
Latest PEIEC EE&C Plan Budget and Maritime Electric Funding

	Total EE&C Plan Budget ($)	Maritime Electric Contribution (%)	Maritime Electric Contribution ($)
Total EE&C Plan (three years)	$24,521,883	18%	4,413,939
Demand Response Programs portion	$5,380,000	18%	968,400

[23] Refer to Order UE24-02, Table at paragraph 46.
[24] Refer to Order UE24-02, Table at paragraph 43. The remaining 82 per cent of the costs were to be funded by Summerside Electric, the Federal Government and the Provincial Government.

In its response to Commission Staff IR-93(d) in Docket UE20742, Maritime Electric advised that it participated in discussions with efficiencyPEI between December 2025 and March 2026 regarding commencement of the DR pilots but efficiencyPEI subsequently advised Maritime Electric that the work had been paused in April 2026.[25]

In its March 13, 2026, response to Commission Staff IR-16 in the same docket, PEIEC confirmed that no DR programs were operational.[26] efficiencyPEI has since confirmed with Maritime Electric that the pilot remains paused. Because Maritime Electric does not receive detailed expenditure or program evaluation information, the Company cannot determine if or how the approximately $968,400 attributable to its customers was used.

The latest EE&C Plan expired on February 28, 2026. Based on information filed in Docket UE20742, Maritime Electric understands that PEIEC intends to file a new EE&C Plan by March 31, 2027.[27]

Current Status – Electric Vehicle Charging Peak Reduction Pilot

In its response to Commission Staff IR-93(a) in Docket UE20742, Maritime Electric advised the Commission that it is currently supporting an EV charging peak reduction pilot:

> Maritime Electric is currently supporting a province-wide artificial-intelligence behind-the-meter electric vehicle ("EV") charging pilot being developed by BluWave-ai. The pilot project is aimed to demonstrate BluWave-ai's EV Everywhere solution, which encourages customers with EVs who wish to participate to shift EV charging during times that are better for the grid (e.g., during periods of high renewable energy generation or at nighttime). Although BluWave-ai's project is independent of Maritime Electric, Maritime Electric's support includes providing historical load data, live load and generation data feeds, and other related system information. In exchange, BluWave-ai will share data with Maritime Electric, including where and when EV charging is occurring, how much EV charging load is currently and expected to be on the system, how much flexibility

25 Exhibit M-33. efficiencyPEI is the administrator of PEIEC's EE&C Plan.
26 UE20742, Exhibit EC-11.
27 Exhibit EC-15, response to IR-20(b).

is available to shift charging to better times for the grid, and how local drivers respond to signals shaping charging behaviour. This information is expected to help support the potential development of innovative rates that incent customers to shift EV charging load to off-peak periods.

The BluWave-ai EV Everywhere solution is under development; however, once operational, the Prince Edward Island ("PEI") pilot project is estimated to result in approximately 1 MW of peak load reduction.[28]

The Company's response represents the current status of the pilot.

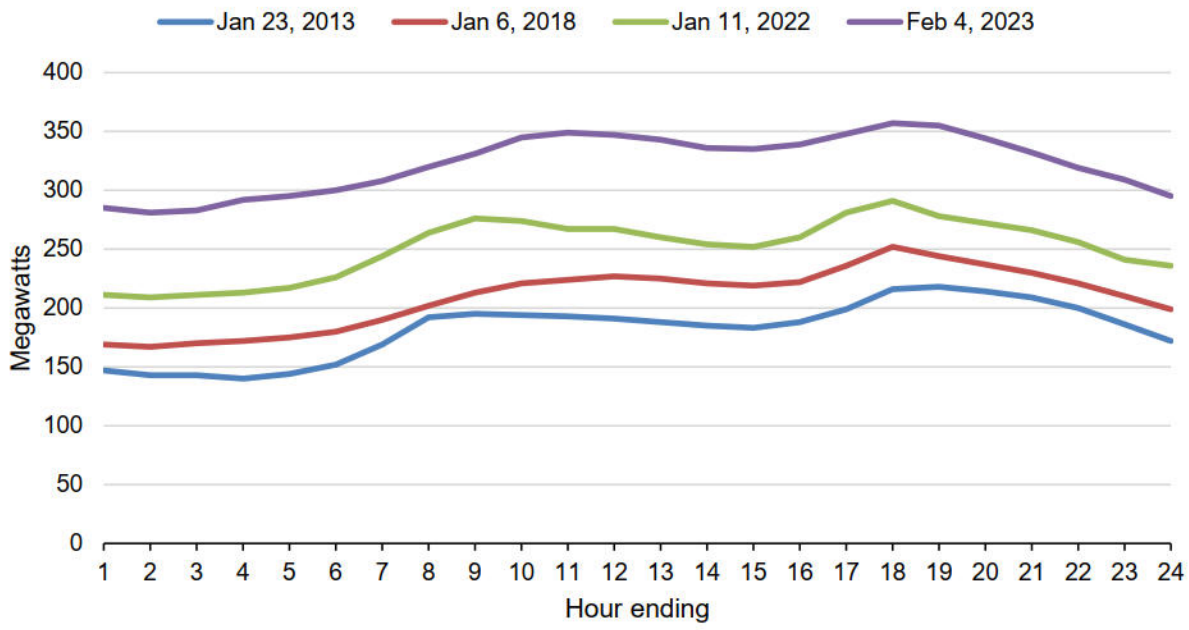
Potential

The DR initiatives in PEIEC's latest EE&C Plan were based on the Dunsky Study. Under its Customer Incentives Scenario, the Dunsky Study estimated achievable DR potential of 17.6 MW by 2025 and 20.6 MW by 2030.[29] The study concluded that DR potential was constrained principally by PEI's relatively flat load profile rather than by cost-effectiveness or customer participation.[30]

Figure 3 shows that the shape of PEI's relatively flat daily load profile has remained essentially unchanged in recent years, despite significant load growth. The reason is that load growth has been driven primarily by the electrification of space heating. During cold weather, space heating is required during all hours of the day, and thus the daily load profile for peak days has shifted upward, but by approximately the same amount for all hours. Accordingly, the Dunsky Study results remain relevant.

[28] Exhibit M-33.
[29] Prince Edward Island Energy Efficiency Potential Study, Docket UE41401, Exhibit E-1(i), Table 3-4, page 62.
[30] Docket UE41401, Exhibit E-1(i), page 60, "PEI's Flat Load Curve is the Primary Constraint".

FIGURE 3
Maritime Electric Peak Daily Load Profiles



Because the latest EE&C Plan targeted 20.5 MW – essentially the full achievable potential identified in the Dunsky Study – the available evidence does not identify material incremental DR potential beyond that target. Maritime Electric could not justify duplicative investment if customers were already funding an EE&C Plan intended to capture substantially all identified DR potential.

PEIEC's 20.5 MW DR target is broadly comparable with planned DR levels in neighbouring jurisdictions when expressed as a percentage of peak demand. Table 5 compares the 20.5 MW target relative to PEI's electrical system with forecasts reported by IESO Nova Scotia in its *2026 10-Year System Outlook Report*[31] and by NB Power in its *2026 Integrated Resource Plan*.[32] The 20.5 MW target represented 4.8 per cent of peak load, compared with forecast levels of 4.4 per cent for IESO Nova Scotia 2029/2030 forecast and 6.5 per cent in NB Power's modelled 2031/2032 scenario.

---

31 The IESO Nova Scotia 2026 10-Year System Outlook Report is available at the following link: https://www.ieso-ns.ca/wp-content/uploads/2026/09/20260628-IESO-NS-2026-10-Year-System-Outlook.pdf. DR data is provided in Table 3, page 15 and Table 4, page 18.

32 The NB Power Integrated Resource Plan is available at the following link: https://www.nbpower.com/media/1494283/2026-irp-final-en.pdf. DR data is provided on page 49 and in Appendix B under "Demand Response," page 119, and Appendix H, page 152.

TABLE 5 Comparison of Demand Response with Neighbouring Jurisdictions				
	Demand Response Installed Capacity (MW)	Peak Load (MW)	Demand Response Installed Capacity as Percentage of Peak (%)	Demand Response Reported ELCC (MW)
	A	B	C = A / B	D
Latest PEIEC EE&C Plan DR target	20.5	429[33]	4.8%	Not Reported
IESO Nova Scotia 10-Year Outlook 2026/2027 existing DR	50[34]	2,497	2.0%	11
IESO Nova Scotia 10-Year Outlook 2029/2030 forecast (including CPP program)[35]	112	2,563	4.4%	23
NB Power 2026/2027 year	80	3,163	2.5%	Not reported
NB Power Integrated Resource Plan modelled scenario 2031/2032 year	226	3,475	6.5%	98

If PEIEC files a new EE&C Plan by March 31, 2027, Maritime Electric recommends that the Company be meaningfully consulted early in its development. Early consultation would support realistic DR targets, appropriate program design, accurate measurement and verification, and assessment of interactions with TVP and BESSs.

Considerations

DR targets should account for the finite amount of load available for reduction or shifting. A PEIEC plan that again targets approximately 20.5 MW may capture essentially all of the achievable DR potential identified in the Dunsky Study, leaving limited incremental potential for possible competing TVP and BESS applications. The combined capacity value of these resources should therefore be assessed on a portfolio basis, to identify a least cost approach to achieve the potential for demand reduction.

33 Peak load represents Maritime Electric's latest peak forecast for PEI (including Summerside Electric customers) for the year 2030.
34 Maritime Electric estimate based on reported ELCC of existing DR.
35 IESO Nova Scotia forecast DR includes contributions from NS Power's CPP program.

After the completion of Maritime Electric's AMI Project, the Company's metering system will be capable of recording demand in intervals as short as 15 minutes, but customer-specific information cannot be provided to PEIEC or efficiencyPEI without appropriate customer consent or other lawful authority. Similar restrictions apply to requests for lists of large customers. These requirements must be incorporated into program recruitment, data-sharing and verification processes.

3.3 Time-Varying Pricing

TVP cannot be implemented before completion of Maritime Electric's AMI Project. The AMI Project includes deployment of advanced meters and a new CIS with the interval-data and billing capabilities required for TVP. Maritime Electric expects the project to be completed in the second quarter of 2028.[36]

The near-term peak reduction potential for TVP appears to be modest, based on the Dunsky Study and NS Power's TVP pilot.

Potential – Dunsky Study

The Dunsky Study estimated achievable TOU peak reduction of 10.7 MW by 2030.[37] The estimate assumed that TOU rates would apply by default to all residential and commercial customers, subject to an opt-out option.[38] This participation model may overstate the results achievable as compared to a voluntary opt-in program.

The Dunsky Study also assumed a 3:1 peak-to-off-peak price ratio (i.e., the on-peak price is three times the off-peak price).[39] Higher price differentials generally produce stronger customer response, making this a material assumption. However, the study did not provide analysis demonstrating that a 3:1 ratio reflects Maritime Electric's cost causation or an appropriate rate design. TOU prices should reflect the estimated cost of serving customers during the applicable periods; unsupported price differentials could create rate inequities or cross-subsidization between customers.

---

36 The 2028 timeline includes the installation of all AMI Project meters and the implementation of the new CIS.
37 Docket UE41401, Exhibit E-1(i), Table 3-2, page 57. 10.7 MW represents the PEI total, including City of Summerside customers.
38 Docket UE41401, Exhibit E-1(i), Section 3.2.3, page 66.
39 Docket UE41401, Exhibit E-1(i), Volume II, Appendix C, Section C.5.5, page 48.

The Dunsky Study's 10.7 MW estimate may therefore not be indicative of the peak reduction that Maritime Electric could achieve through a voluntary and appropriately designed TOU program.

Potential – NS Power Pilot

NS Power launched a residential and commercial TVP pilot in 2021. Results are reported in its *Time-Varying Pricing Pilot Program Phase 4 Report* ("TVP Pilot Report"), filed with the Nova Scotia Energy Board on June 30, 2026.[40] Phase 4 included 5,616 residential TOU participants, 2,642 residential CPP participants and 108 commercial participants.

The TVP Pilot Report describes the TOU pilot as follows:

> TOU has two four-hour peak periods occurring on all non-holiday weekdays, 7–11 AM and 5–9 PM, November through March (Winter); all other hours during the Winter period are considered off-peak. During Winter off-peak periods, customers are charged the same as the standard offer rate (SOR), while during on-peak periods, customers are charged twice the off-peak rate [i.e., a peak to off-peak price ratio of 2:1]. From April to October (non-Winter), the rate is approximately 30% lower relative to the SOR for the entire season.[41]

The TVP Pilot Report describes the CPP pilot as follows:

> CPP has up to 18 four-hour events per Winter season. Events are scheduled by the System Operator based on the day-ahead system load forecast and dispatch schedule. Customers must be notified by 4 PM the day before the event. Customers are reminded within one hour of the event starting and once it is completed. Events can be called up to three times per week (Monday through Sunday), at any time between 6 AM and 11 PM, and may include up to three weekend events per TVP Season. Peak pricing for CPP is 10 times the SOR price,

[40] Matter 12932, Exhibit N-2. The Time-Varying Pricing Pilot Program Phase 5 report is more recent but does not include residential and commercial results due to a cybersecurity incident.
[41] Matter 12932, Exhibit N-2, Executive Summary, "Tariffs", page 2.

and off-peak pricing is approximately 16% lower than the SOR rate for each rate class.[42]

Table 6 summarizes the average peak reductions reported for the TOU and CPP programs. Residential TOU participants reduced average demand by 0.15 kW during the morning peak and 0.17 kW during the evening peak. Residential CPP participants reduced average demand by 0.61 kW and 0.77 kW, respectively. On a per-customer basis, CPP produced materially greater residential demand reductions than TOU.

Commercial TOU participants reduced average demand by 6.4 per cent during the morning peak and 8.6 per cent during the evening peak.[43] Commercial CPP participants reduced average demand by 11.4 per cent and 7.9 per cent, respectively. The commercial results do not demonstrate a material difference between TOU and CPP.

TABLE 6
NS Power Time-Varying Pricing Pilot Results[44]

TVP Tariff	Absolute Load Reduction (kW per customer)		Relative Load Reduction (%)	
	Morning Peak	Evening Peak	Morning Peak	Evening Peak
Residential TOU	0.15	0.17	7.4%	7.9%
Residential CPP	0.61	0.77	24.6%	28.5%
Commercial TOU	0.7	0.9	6.4%	8.6%
Commercial CPP	7.9	5.1	11.4%	7.9%

To the extent that NS Power's participating customers and their load characteristics are similar to those of Maritime Electric's customers, the pilot results provide a reasonable basis for developing indicative estimates of potential demand reduction, rather than forecasts.

42 Matter 12932, Exhibit N-2, Executive Summary, "Tariffs", page 2.
43 Relative load reduction is used for the commercial programs due to the significant variability in size of commercial customers.
44 Results data are derived from Matter 12932, Exhibit N-2, Executive Summary, Table 1, page 16 and Table 2, page 18. Results shown were statistically significant.

Table 7 applies the NS Power evening demand reduction values to Maritime Electric's residential customer base. At an assumed voluntary opt-in participation rate of 10 per cent, the indicative evening peak reduction is 1.2 MW for TOU and 5.4 MW for CPP.

TABLE 7
Calculation of Maritime Electric Indicative Residential TOU and CPP Load Reduction

	Reference	TOU	CPP
Number of residential customers[45]	A	70,058	70,058
Estimated customer participation rate (%)	B	10%	10%
Participating customers	C = A x B	7,006	7,006
NS Power TVP Pilot Report absolute evening load reduction per customer (kW)	D	0.17	0.77
Indicative evening load reduction (MW)	E = C x D / 1,000	1.2	5.4

Table 8 applies the NS Power commercial evening reduction percentages to Maritime Electric's General Service class. At an assumed voluntary opt-in participation rate of 10 per cent, the indicative evening peak reduction is approximately 0.6 MW under either TOU or CPP.

[45] Number of Maritime Electric Residential Urban and Residential Rural customers as of January 2026. Excludes seasonal customers.

TABLE 8 Calculation of Maritime Electric Indicative General Service TOU and CPP Load Reduction			
	Reference	**TOU**	**CPP**
Number of general service customers[46]	A	8,248	8,248
Estimated customer participation rate (%)	B	10%	10%
Participating customers	C = A x B	825	825
2023 Cost Allocation Study General Service coincident peak[47] (kW)	D	67,948	67,948
2023 Cost Allocation Study General Service number of customers[48]	E	7,906	7,906
Estimated average coincident peak per customer (kW)	F = D / E	8.6	8.6
NS Power TVP Pilot Report relative evening load reduction per customer (%)	G	8.6%	7.9%
Indicative evening load reduction (MW)	H = C x F x G / 1,000	0.6	0.6

Maritime Electric will examine TVP through Rate Design Stage 2.[49] However, based on the indicative estimates above, TVP alone is unlikely to provide sufficient demand reduction to materially address the Company's resource adequacy needs. TVP should therefore be considered as one component of a broader DSM strategy.

Limitations

TVP is not a near-term demand reduction measure. Maritime Electric must first complete the AMI Project, design an appropriate rate, obtain Commission approval, undertake customer education and, preferably, conduct a pilot before proposing permanent implementation.

A pilot would allow Maritime Electric to assess customer participation, response, bill impacts, load-shifting behaviour and operational results under local conditions. This information is necessary to establish evidence-based and equitable TVP rates on a permanent basis, if justified. TVP rates should therefore be informed by demonstrated customer response and system value from the pilot. Maritime Electric intends to begin assessing TVP through Rate Design Stage 2.

46 Number of Maritime Electric General Service customers as of January 2026. Excludes seasonal customers.
47 Docket UE21232, Maritime Electric 2023 Cost Allocation Study (October 31, 2024), Table 7, page 22. Represents the coincident peak using the 3CP methodology. Excludes seasonal customers.
48 Docket UE21232, Maritime Electric 2023 Cost Allocation Study (October 31, 2024), Appendix B, Schedule 2.2. Excludes seasonal customers.
49 Refer to Rate Design Stage 1, Docket UE22503.

3.4 Voluntary Customer Conservation

Voluntary customer conservation can provide short-term operational assistance during periods of system stress but is not a dependable long-term capacity resource. Maritime Electric issued conservation requests in January and February 2025. Although the precise customer response cannot be isolated from weather and other load variations, the Company estimates that the events produced demand reductions ranging from 0 to 10 MW.

Maritime Electric has developed a Grid Status Index and Current System Load graphic to support customer communication during conservation events. Both tools are available on the Company's website and provide information about system conditions and the potential need for conservation.[50] The tools received significant website traffic and positive customer feedback during the February 2025 event.

The Company also publishes year-round conservation guidance and uses its website and social media channels to communicate specific actions customers can take during conservation events.[51]

Conservation requests should be reserved for periods of genuine system need. Frequent or prolonged use could reduce customer participation and responsiveness. Accordingly, voluntary conservation should be treated as an emergency or short-term operational measure rather than firm capacity for resource adequacy planning.

3.5 Preliminary Implementation Timeline

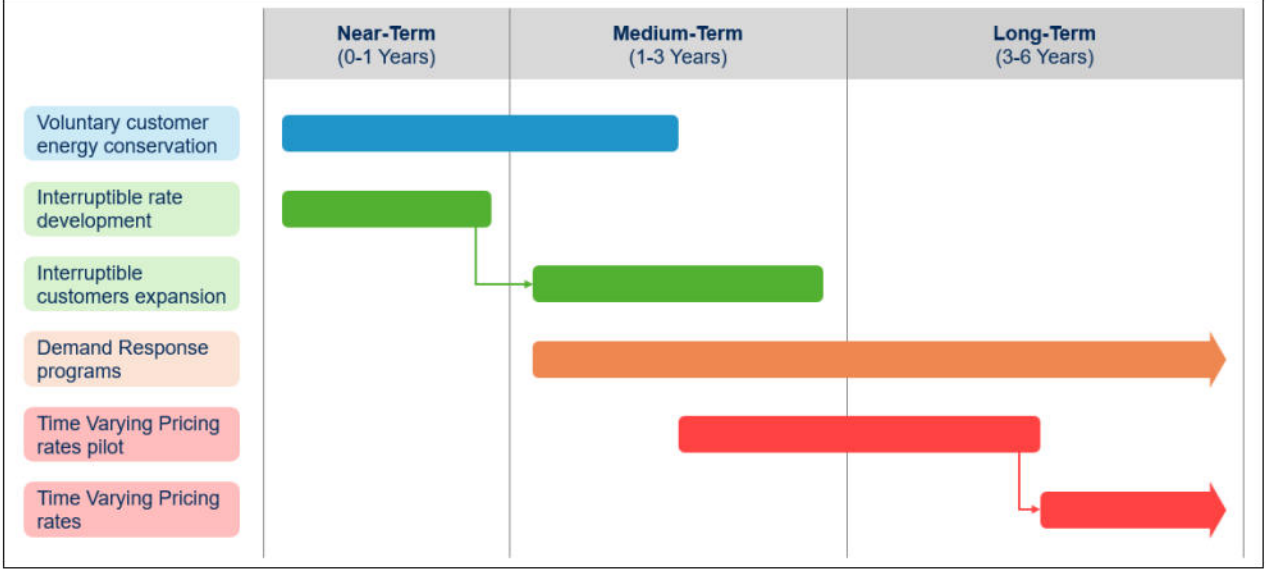
Regardless of what entity is responsible for DSM, demand reduction measures differ materially in their implementation requirements and potential timing. Figure 4 presents a preliminary, high-level implementation timeline consisting of near-term (0 to 1 year), medium-term (1 to 3 years) and long-term (3 to 6 years) periods, assuming that adequate resources are available and regulatory approvals are granted. The timeline is based on a preliminary assessment and does not represent implementation commitments or approved targets.

[50] The Grid Status Index and Current System Load graphic are available at the following link: https://www.maritimeelectric.com/outages/outages/grid-status/.

[51] The customer conservation tips webpage can be found at the following link: https://www.maritimeelectric.com/energy-savings/.

Achieving the indicated timing would require prompt action, coordination with PEIEC and customer engagement. Measures dependent on interval metering and billing capabilities also require successful completion of the AMI Project.

FIGURE 4
Preliminary High-Level Demand Reduction Measures Implementation Timeline



4.0 PLANNING CONSIDERATIONS

Demand reduction measures may reduce peak demand or shift consumption from peak to off-peak periods. Figure 5, adapted from the Dunsky Study, illustrates the distinction. Peak reduction lowers demand during the target period without necessarily increasing demand in adjacent hours. Peak shifting moves consumption from the target period to another time and may therefore create load recovery or rebound.

FIGURE 5
Dunsky Study Peak Reduction and Peak Shifting Diagram[52]

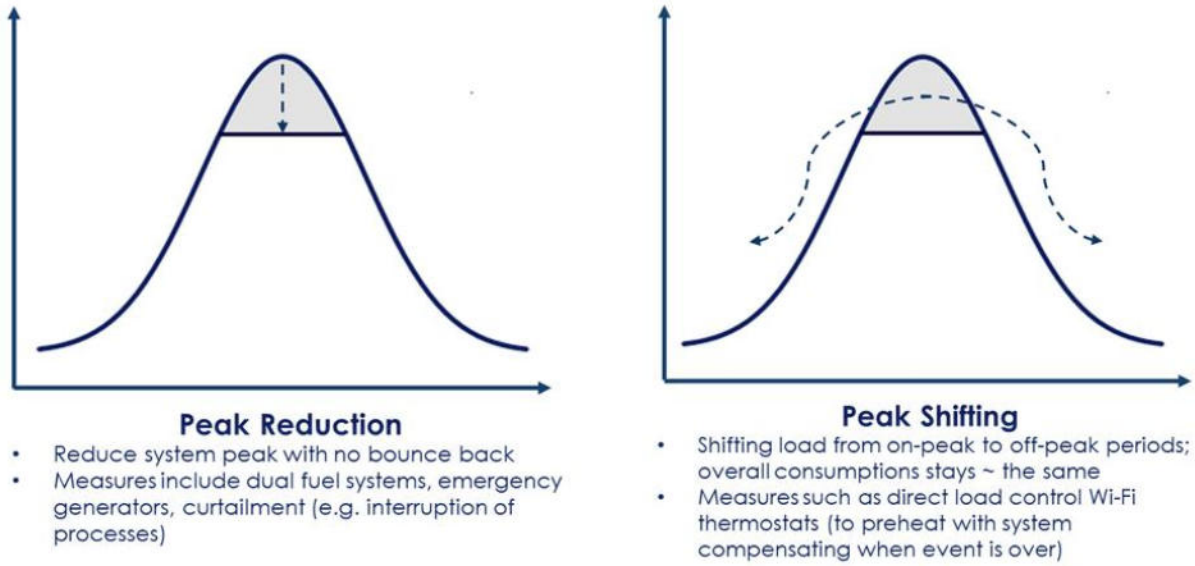


Table 9 categorizes representative measures according to whether they primarily reduce peak demand or shift load. The categories are not mutually exclusive; some measures may result in both peak reduction and load shifting depending on customer behavior and the affected end use. Table 9 therefore identifies the predominant effect of each measure rather than an exclusive classification.

Utility-scale energy storage is included in Table 9 because it also shifts energy between periods.

[52] Docket UE41401, Exhibit E-1(i), page 52.

TABLE 9 Predominant Effects of Demand Reduction Measures		
	Peak Reduction	**Load Shifting**
Interruptible Customers	Interruptible service contracts[53]	-
Demand Response	Curtailment programs Dual-fuel heating programs Behind-the-meter generation	Controllable water heaters Space-heating control Customer energy storage EV charging control Vehicle-to-grid programs Commercial process controls
Time-Varying Pricing	CPP Peak rebate programs	TOU rates EV charger rates Real-time pricing
Utility-Scale Energy Storage	-	Utility-scale BESS

The distinction between peak reduction and load shifting is important because measures targeting the same peak or load-shifting opportunity may compete with one another. For example, a BESS used for peak shifting may target the same load as controllable water heaters or TOU rates. Demand reduction measures must therefore be evaluated together with BESS resources and other existing or planned capacity resources.

4.1 Resource Adequacy

The demand reduction achieved by a program is not necessarily equal to the ELCC capacity it provides for resource adequacy planning. The ELCC contribution of DR and TVP depends on program characteristics, including availability, call duration, annual call limits and customer performance, and their interactions with other capacity resources. The E3 Study, filed with the Commission in July 2026, evaluated the ELCC of several DR configurations.[54] Table 10 presents results for a curtailment program under different call durations and annual call limits.

[53] Although interruptible customers reduce system peak load, curtailing them does not reduce the amount of firm peak load.

[54] Maritime Electric Resource Adequacy Study, Docket UE20742, Exhibit M-30, IR-23 – Attachment 1.

TABLE 10 E3 Study Demand Response ELCC Results[55]				
Call Duration (hours)	**Number of Calls per Year**	**DR Capacity (MW)**	**ELCC (MW)**	**ELCC (%)**
4	18	10	7.6	76%
6	12	10	9.5	95%
8	9	10	9.5	95%
12	6	10	8.3	83%
24	3	10	6.2	62%
72	1	10	2.8	28%

The results demonstrate that ELCC depends on program design. Although each modelled program enlists 10 MW of demand reduction, the ELCC ranges from 2.8 MW to 9.5 MW depending on call duration and annual call limits. The E3 Study also assessed the interaction between DR and 4-hour BESS, as summarized in Table 11.

TABLE 11 E3 Study ELCC Results of Demand Response Combined with Storage[56]				
DR Capacity *Program with 6 hours duration and 12 calls per year* (MW)	**4-hour BESS Capacity (MW)**	**Sum of Standalone ELCCs (MW)**	**Combined ELCC (MW)**	**Interactive Effect (MW)**
20	0	19.0	-	-
0	20	13.4	-	-
20	20	32.5	27.2	(5.3)

The results demonstrate that standalone ELCC values cannot necessarily be added together. The standalone ELCCs of a 20 MW DR program and a 20 MW 4-hour BESS are 19.0 MW and 13.4 MW, respectively, for a total of 32.5 MW. However, when modelled together, their combined ELCC is only 27.2 MW, or 5.3 MW less than the sum of the standalone values.[57] This 5.3 MW difference arises because both resources contribute towards reducing loss-of-load risk during many of the same hours. Demand reduction and storage resources should therefore be evaluated together on a portfolio basis.

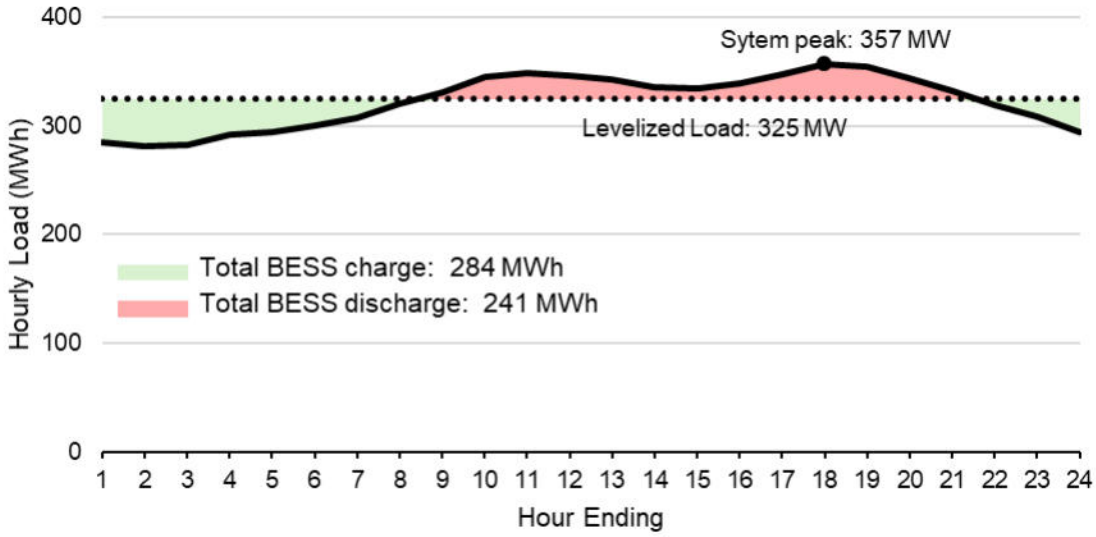
55 Data from E3 Study, Table 5-3, page 49.
56 Data from E3 Study, Table 5-4, page 49.
57 32.5 MW – 27.2 MW = 5.3 MW.

4.2 Interactions with Energy Storage

The interaction between DR, TVP and BESS resources is influenced by Maritime Electric's relatively flat load profile. Figure 6, previously filed as Exhibit M-1 in Docket UE20742, illustrates how a BESS could charge during lower-load hours and discharge during peak hours to levelize the system load curve.[58] In the example, the BESS charges when system load is below the levelized load (shown in green) and discharges when load is above it (shown in red).

The maximum theoretical peak reduction in the example by levelizing the load using BESS is 32 MW, reducing the peak from 357 MW to 325 MW. Achieving the theoretical peak reduction of 32 MW would require perfect forecasting of hourly loads.

FIGURE 6
Maritime Electric System Load Curve for February 4, 2023[59]



Once the load profile is fully levelized within the relevant period, no additional peak-to-off-peak shifting potential remains in that profile. DR and TVP measures that shift load during the same hours may therefore reduce the incremental value of a BESS, or vice versa. A comprehensive portfolio study is required to quantify the combined effects of prospective DR programs, TVP and BESSs.

---

58 Docket UE20742, Exhibit M-1, Section 8.3, page 113.
59 Chart is from Docket UE20742, Exhibit M-1, Figure 29, page 114. The load curve (solid black line) is the actual Maritime Electric load experienced on February 4, 2023.

4.3 Coordination with PEIEC

Effective coordination between Maritime Electric and PEIEC is required in three areas: governance, planning information and operational arrangements.

First, the respective responsibilities of PEIEC and Maritime Electric should be clearly defined. Currently, PEIEC is responsible for developing and administering EE&C Plans, while Maritime Electric is responsible for system planning and operation and holds the customer load information needed to assess when and how DR can support the system. Subject to customer consent, applicable privacy requirements and Commission approval, Maritime Electric is prepared to support PEIEC's development of DR initiatives that are achievable, measurable and aligned with electrical system needs.

Second, Maritime Electric requires timely access to program forecasts, implementation status, participation, measured demand reductions, costs and evaluation results. This information is needed to incorporate verified savings into load forecasts, assess consistency with resource adequacy needs and calculate ELCC using actual program parameters and performance. It would also allow interactions among DR, TVP, and BESSs to be identified before targets are established.

Third, the parties must establish practical operational arrangements for program design, customer recruitment and consent, access to interval data, event dispatch, measurement and verification, and reporting. These arrangements must comply with customer privacy requirements and clearly identify how Maritime Electric will communicate system needs and how program performance will be confirmed.

5.0 CONCLUSION

Maritime Electric currently relies on 14 MW of interruptible load for resource adequacy planning and can call on those customers under existing service agreements. Up to 5 MW of additional coincident load may be technically suitable for interruptible service, subject to customer interest, equipment and operating requirements, and appropriate Commission-approved interruptible service rates.

DR programs may provide meaningful demand reduction, but the DR initiatives approved under PEIEC's latest EE&C Plan are not operational and it is unclear what, if any, progress was made. Any programs should be developed through meaningful coordination among PEIEC, Maritime Electric and the Commission so that targets, costs, customer impacts, data requirements, measurement and verification, and responsibilities are clearly established. This coordination is particularly important for the next EE&C Plan because its targets may represent essentially all of the achievable DR potential identified for PEI, leaving limited justification for separate or duplicative programs.

TVP cannot be implemented until the AMI Project is complete and rate design, Commission approval, customer education and preferably a pilot have been completed. The available evidence indicates that near-term TVP potential is modest and that DR, TVP, and BESSs may target the same potential peak load reduction. These measures should therefore be evaluated together through portfolio and ELCC analysis before their capacity value is relied upon for resource adequacy planning.

Voluntary conservation requests may provide short-term operational assistance during system stress, but the response is uncertain and should not be treated as firm capacity.