

The Narragansett Electric Company d/b/a Rhode Island Energy

System Reliability
Procurement (SRP)
Investment Proposal
for
Electric Demand Response
2027-2029

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REVIEW

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Rhode Island Energy™

a PPL company

System Reliability Procurement Investment Proposal for Electric Demand Response 2027-2029

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System Reliability Procurement Investment Proposal for Electric Demand Response 2027-2029

Section 1. Introduction

In accordance with Least-Cost Procurement (“LCP”) Statute and LCP Standards, Rhode Island Energy respectfully files this proposal for continuation of its electric demand response program, branded ConnectedSolutions, during 2027-2029. Herein, the Company describes electric demand response within the stepwise system reliability procurement process, discusses the objectives that underpin the design of ConnectedSolutions, proposes and motivates some program design modifications, sets an annual peak demand reduction procurement schedule with associated budget, and requests approval for cost recovery of the budget via the System Reliability Procurement (“SRP”) Factor added to the Energy Efficiency System Benefit Charge (EE Charge).

Timeline for Development and Review

March 19, 2026	Present workplan at the Rhode Island Energy Efficiency and Resource Management Council (“Council”) meeting
April 14, 2026	Present workplan to the SRP Technical Working Group meeting
June 18, 2026	Present and discuss the core design elements, program evolution, and potential changes to be included in the draft SRP Investment Proposal at the Council meeting
July 30, 2026	Preliminary draft SRP Investment Proposal circulated for external review and feedback
August 11, 2026	Opportunity for discussion of draft SRP Investment Proposal at the SRP Technical Working Group meeting
August 20, 2026	Opportunity for discussion of the draft SRP Investment Proposal at the Council meeting
August 28, 2026	Stakeholder comments due on the draft SRP Investment Proposal
September 2026	Rhode Island Energy reviews stakeholder feedback and incorporates revisions, as appropriate
September 2026	Revised final draft of SRP Investment Proposal submitted to the Council as meeting materials
September 24, 2026	Revised final draft, opportunity for discussion at the Council meeting
September 2026	Revised final draft, opportunity for discussion at the SRP Technical Working Group meeting
September 2026	Revised final draft of SRP Investment Proposal submitted to the Rhode Island Division of Public Utilities and Carriers (“Division”) and Council for review per LCP Standards 6.3.G
October 15, 2026	Discussion and vote at the Council meeting
November 20, 2026	SRP Investment Proposal included as Appendix to <i>2027-2029 SRP Three-Year Plan</i> filed with the Rhode Island Public Utilities Commission (“Commission”)
November 20, 2026	SRP Investment Proposal filed with the Commission

Section 2. Electric System Needs and Optimization

2.1 Reducing Supply Costs through Electric Demand Response

2.1.1 System Need or Optimization

Electricity supply costs are partially driven by the high cost of electricity during the few hours of the year when we use the most electricity. During these “peak periods,” the most expensive generators are needed to supply enough electricity to meet demand, and their cost is factored into the supply rates customers incur. Electric infrastructure also must be sized to deliver this level of electricity to meet peak demand.

Although Rhode Island Energy is an electricity delivery company (akin to FedEx or UPS for delivering packages), we are obliged to help customers who choose not to buy supply from a third-party supplier by buying electricity in bulk via supply contracts chosen in auctions and through the wholesale market. Rhode Island Energy cares about helping customers access the most affordable electricity and, as such, has identified an opportunity to reduce supply costs by incentivizing demand reductions during peak periods. Reducing peak supply needed also has the corollary benefits of avoiding further investments in the electric system infrastructure.

2.1.2 System Reliability Procurement – Electric System Screening Criteria

This optimization meets all four electric system screening criteria and is, therefore, an opportunity for system reliability procurement:

1. The optimization is not related to an asset condition issue;
2. The optimization is eligible because the optimization requires load relief;
3. The opportunity for system reliability procurement is likely to garner sufficient market interest; and
4. There is adequate time to implement a system reliability procurement solution.

2.1.3 Best Alternative Utility Reliability Procurement Solution

Demand response proposed for this system need is specifically to reduce system-level peak demand. In the absence of demand response, the best alternative Utility Reliability Procurement is to procure the capacity required to meet peak demand and build the infrastructure required to deliver that peak load.

2.1.4 Solicit and Evaluate System Reliability Procurement Proposals

This system reliability procurement opportunity has been implemented since 2019 through the Company’s demand response program, branded ConnectedSolutions. As of September 2026, approximately 14,000 customers have participated in ConnectedSolutions through their connected thermostats, battery energy storage systems, electric vehicles, and production process curtailments. In aggregate, the participation of these customers has led to a meaningful reduction in peak load. Rhode Island Energy submits this SRP Investment Proposal to procure peak demand reduction in 2027 through 2029 through a pay-for-performance program with a “bring your own device” program model.

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2.1.5 Request Regulatory Approval

This SRP Investment Proposal is submitted in compliance with Chapter 5 of the LCP Standards.

2.1.6 Implement Solution

Pending regulatory approval, Rhode Island Energy will reopen ConnectedSolutions for the 2027 peak demand season on June 1, 2027. Rhode Island Energy will report the resulting impacts in its *SRP ConnectedSolutions Annual Report*.

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Section 3. Motivation, Objectives, and Program Design Principles

Electricity supply costs differ in the summer and the winter, driven by economics of generation plants needed to serve the amount of electricity consumed by customers (called “load”) and the fuel costs for those generation plants. On hot, humid summer weekday afternoons and evenings, customers typically demand the most electricity, and this “peak demand” requires relatively less economically efficient generators to produce electricity to serve the load. These “peaker plants” are the most expensive generators and drive-up summer electricity supply costs.¹ Furthermore, electric transmission and distribution infrastructure must be sized appropriately to serve peak demand.

Based on the relative cost savings identified, Rhode Island Energy proposes to procure peak demand reduction through a program-based procurement process in 2027-2029. By procuring peak demand reduction rather than serving peak demand, we estimate avoided intrastate energy and capacity costs, associated intrastate demand reduction induced price effects (DRIPE) for energy and capacity, some level of energy price arbitrage, avoided regional network service (“RNS”) charges, and avoided infrastructure costs, all of which will lead to lower electric bills for customers in addition to non-electric bill value that may be accrued by participants and society.

The objective of Rhode Island Energy’s demand response program, branded ConnectedSolutions, is to reduce regional coincident peak demand.

In offering ConnectedSolutions, the Company asserts the following program design principles, explained further below:

1. Be agnostic toward technology and participants
2. Encourage diffuse and diverse participation for reliable response
3. Right-size incentives
4. Comply with LCP Standards
5. Facilitate easy participation
6. Share value created

Stemming from the program objective to reduce regional coincident peak demand, Rhode Island Energy does not differentiate a kilowatt reduced by one technology or participant from a kilowatt reduced by another technology or participant. Each of those kilowatts reduced has the same value for putting downward pressure on electricity costs.² In this manner, ConnectedSolutions is technology and participant agnostic.

¹ Electricity supply costs reflect three components: energy, capacity, and ancillary. Reducing peak demand puts downward pressure on energy and capacity supply cost components, which benefits all customers.

² In our modeling, Rhode Island Energy includes the value of energy price arbitrage for battery energy storage systems and the value of energy savings and associated DRIPE for thermostats.

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This principle is most clearly displayed in commercial and industrial participation in ConnectedSolutions, where participants can use any technology, process, or other innovation to reduce peak demand. For residential and small business participants, technology is limited by practical considerations for implementation (i.e., a subset of thermostat, EV, EV Charger, and battery manufacturers and models).

ConnectedSolutions is a voluntary program; not all participants reduce demand when called on, nor are they required to. Rhode Island Energy seeks to build a demand response program with a relatively certain level of response from its participants. This leads to favoring program design that encourages diffuse participation (i.e., no one participant's level of response substantially sways the overall peak demand reduction achieved by the program) and diverse participation (i.e., no one technology type exerts a disproportionate influence on the overall peak demand reduction achieved by the program). This principle is intended to be complementary – not contradictory – to the principle of being technology and participant agnostic. All else equal, more participants and more technologies will result in a more reliable and consistent level of actual average peak demand reduction. Rhode Island Energy seeks to encourage more participants over fewer, with more technology types than fewer, within its program design for ConnectedSolutions.

While the value of each kilowatt of peak demand reduction is roughly equivalent, achieving each kilowatt of peak demand reduction may require different levels of action or opportunity cost on the part of the participant. For example, an automatic setback to a participant's thermostat requires no action, while a request for participants to reduce their thermostats manually requires some action. Another example: having a thermostat that is controllable is a relatively small upfront cost and workload when compared to the upfront costs and work entailed to install a battery energy storage system. A third example for good measure: the opportunity cost of setting back a thermostat (potential temporary discomfort) is small relative to the opportunity cost of skipping a production sequence (definite unrecoverable lost revenue). Rhode Island Energy's third program design principle posits that incentives should be right sized to spur action; because different methods of reducing peak load require different burdens, it makes sense to differentiate incentive levels. Doing so will minimize program costs while achieving the same peak demand reduction.

Demand response activities are contemplated within the Least-Cost Procurement Statute, and further stipulated in the Least-Cost Procurement Standards. Accordingly, demand response must be reliable, prudent, cost-effective, and environmentally responsible. These Standards constitute guardrails on program design. One example of the application of these guardrails is consideration of market continuity and disruption to the market that may arise from program design changes. Another example: we propose to adhere to the standard of environmental responsibility by disallowing the enrollment of any new fossil fuel-based generation during the 2027-2029 program years and require that any participating fossil-based generation, enrolled as of the 2026

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season, have the requisite environmental compliance permits from the Rhode Island Department of Environmental Management.

Of course, customers only receive benefits of ConnectedSolutions if there are program participants, so Rhode Island Energy is proposing to clarify how customers in different rate classes can participate in ConnectedSolutions. The intent is to clarify how and when participants may stack incentive payments.

Finally, Rhode Island Energy is creating value by offering ConnectedSolutions; creating value is a cornerstone of program design. Rhode Island Energy is careful to procure peak demand reduction through ConnectedSolutions such that customers benefit through reduced utility bills *regardless of their participation in the program*. Of course, customers who participate will also receive incremental value through incentive payments. In considering tangible monetary value – customers keep money in their wallets because electricity bills are less expensive with ConnectedSolutions relative to the counterfactual of serving peak load – Rhode Island Energy seeks to share this quantifiable monetary value between customers and its shareholders such that *all parties* are better off with ConnectedSolutions than without.

Section 4. Coordination with Other Programs and Policies

Rhode Island Energy recognizes that continuing to provide the best value to Rhode Island customers requires coordination with other parts of the energy system, Company filings and activities, and relevant state policies and rebate programs. For the 2027-2029 Plan, Rhode Island Energy will continue to implement ConnectedSolutions in coordination with other activities where such coordination improves customer experience, supports system optimization, and enhances cost-effectiveness. Rhode Island Energy has also sought to align ConnectedSolutions with relevant state policies and objectives. Specific coordination opportunities are identified below.

4.1 Energy Efficiency

Rhode Island Energy will coordinate ConnectedSolutions offerings with its energy efficiency programs where appropriate. Rhode Island Energy views demand response and energy efficiency as complementary components of a coordinated portfolio, with each supporting customer engagement, system optimization, and cost-effective alternatives to traditional infrastructure investments. This coordination includes aligning customer outreach, leveraging shared program delivery channels, and encouraging adoption of energy efficiency measures that can enable demand response participation (e.g. installation of connected and supported devices).

Examples of ongoing coordination efforts include joint marketing initiatives promoting energy efficiency thermostat rebates alongside ConnectedSolutions enrollment opportunities; targeted communication to small business customers who have participated in energy assessments, audits or other energy efficiency offerings, encouraging enrollment in ConnectedSolutions where eligible; collaborating with energy efficiency [project expeditors](#) to identify opportunities to educate customers about ConnectedSolutions participation during project development and implementation; and coordination of customer education materials and webinars to present energy efficiency and demand response as complementary offerings.

4.2 Advanced Metering Functionality

Rhode Island Energy began installing advanced meters in the spring of 2025 and will complete exchanges in the summer of 2026. Customers will have access to Rhode Island Energy's AMF Customer Portal and associated customer-facing tools, which allows them to view their electricity usage down to the 15-minute interval and set tags and alerts to track trends. These capabilities are expected to improve customer awareness and provide additional tools for managing energy use and monthly bills.

ConnectedSolutions is designed primarily to reduce regional coincident peak demand, helping to lower regional capacity costs while providing broader reliability and affordability benefits to customers. AMF may enable the Company to better understand customer load shapes, identify participation opportunities, and communicate how customer energy use contributes to system peaks and associated costs. Customer-facing tools may help customers better understand energy use patterns, system peak periods, and opportunities to participate in ConnectedSolutions.

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Rhode Island Energy will explore opportunities to leverage AMF and associated data sources to support ConnectedSolutions program objectives. These data sources could support improved identification of customers with load profiles that coincide with peak system conditions; education of customers about program offerings with potential to drive enrollments; as well as possibility to add alerts or notify customers of peak day events.

While the Company is not proposing a location-specific demand response offering as part of this filing, Rhode Island Energy intends to continue evaluating how AMF-enabled insights may support program development. The Company will evaluate opportunities to leverage available system planning and operational data to identify geographic areas, customer segments, or load characteristics that may provide meaningful demand response value. This evaluation may include assessing existing ConnectedSolutions participation levels within identified areas to better understand participation gaps and opportunities.

Where participation potential is identified, Rhode Island Energy may implement targeted outreach and education strategies to increase customer awareness and enrollment in ConnectedSolutions. Potential approaches may include coordination through key account managers, direct mail campaigns, small business outreach, customer education materials, digital communications and other marketing channels.

In advance of each ConnectedSolutions enrollment season, Rhode Island Energy may also communicate with participating Curtailment Service Providers ("CSPs") regarding geographic areas where additional demand response participation may provide incremental system, reliability, or distribution planning value. This information may help CSPs prioritize customer outreach and recruitment activities, particularly among C&I customers capable of delivering meaningful peak demand reductions. Rhode Island Energy may also share information regarding participation gaps and enrollment opportunities identified through its evaluation of available system planning, operational, and customer data.

While ConnectedSolutions would remain a statewide offering, these activities are intended to improve customer understanding of ConnectedSolutions opportunities and encourage participation in areas and customer segments where peak reduction could provide enhanced distribution system and reliability benefits.

4.3 Office of Energy Resources

Rhode Island Energy will continue to coordinate with the Office of Energy Resources ("OER") to support alignment between ConnectedSolutions and broader state energy programs, policies, and market development efforts. This coordination is intended to improve customer experience, help customers identify the combination of programs that best meet their needs, reduce program fragmentation, and maximize the value of demand-side resources in supporting Rhode Island's

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energy and climate objectives. Coordination with OER will continue to evolve over time as market conditions, funding opportunities, and policy priorities develop.

4.3.1 Market Engagement and Stakeholder Coordination

Rhode Island Energy will continue to engage with stakeholders involved in distributed energy resources, including solar, energy storage, and electric vehicle stakeholders, through OER-led forums and other state-facilitated working groups. These engagements support consistent program messaging, customer and installer education, and identification of opportunities to integrate demand response into customer decision-making. Rhode Island Energy also leverages these forums to ensure ConnectedSolutions reflects evolving market conditions and stakeholder input.

4.3.2 Energy Storage Policy and Energy Storage Rebate Alignment

Rhode Island Energy will coordinate with OER to support alignment between ConnectedSolutions and the 2024 Energy Storage Systems Act's 2026 90 MW storage-deployment target and related initiatives supporting battery adoption. This coordination is intended to improve customer and installer awareness of how upfront state incentives through the Energy Storage Rebate (ESR) Program and ongoing ConnectedSolutions performance incentives may complement one another, while maintaining distinct program purposes, funding sources, eligibility requirements, and approval processes. Requiring ConnectedSolutions participation can provide ongoing performance-based value beyond upfront rebates.

In developing the proposed 2027-2029 ConnectedSolutions battery incentive levels and managing overall program budget, the Company considered broader market context for battery adoption, including the availability of complementary state incentives such as the ESR Program. Because the ESR Program may help reduce upfront customer costs, ConnectedSolutions incentive can remain focused on compensating customers for measured peak demand reduction performance rather than serving as the sole driver of battery adoption economics.

4.3.3 Transportation Electrification and EV Program Rebate Alignment

Rhode Island Energy will coordinate with OER's electric vehicle and PowerUpRI charger rebate program(s) to support a consistent, customer-focused approach to EV adoption and managed charging. This includes aligning outreach and education, supporting awareness of available incentives, and encouraging demand response participation through supported EV chargers.

4.4 Green Energy Consumers Alliance Coordination

Rhode Island Energy will coordinate, where appropriate, with the Green Energy Consumers Alliance ("GECA") to support customer education and participation in ConnectedSolutions. As a trusted, consumer-focused organization, GECA provides an effective channel to enhance customer awareness of demand response opportunities.

Coordination may include messaging, supporting customer and installer education, and leveraging GECA's communication channels to reach customers through accessible and trusted

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platforms. This includes building on existing GECA initiatives, such as Shave the Peak program (as mentioned in Section 5.3.5) to reinforce voluntary demand reduction messaging and coordinating with GECA's electric vehicle education efforts to connect EV adoption with ConnectedSolutions participation opportunities.

Rhode Island Energy views engagement with organizations such as GECA as an opportunity to meet customers where they are and improve program participation through clear, consistent communication. This coordination is intended to complement, not replace, Rhode Island Energy's direct outreach efforts and will evolve based on program needs and stakeholder engagement.

4.5 ISO Market Consideration

As part of its ongoing program development and evolution, Rhode Island Energy will consider how demand response resources may align with regional wholesale market structures over time, including ISO New England ("ISO-NE") market constructs such as the Forward Capacity Market.

This assessment will focus on understanding potential alignment between ConnectedSolutions program design and ISO-NE requirements, including aggregation thresholds, measurement and verification protocols, and performance obligations. Rhode Island Energy will evaluate whether participation in the ISO-NE markets could provide incremental system or customer value, taking into account program costs, operational complexity, and performance risk. This effort is intended to inform potential future program evolution while maintaining focus on cost-effective program design.

Rhode Island Energy does not propose to rely on ISO-NE market participation as a core component of the ConnectedSolutions program for the 2027-2029 plan. However, the Company may explore limited participation opportunities where such participation is demonstrated to be cost-effective, consistent with program design principles, and aligned with Least-Cost Procurement requirements. Any such participation would be subject to further evaluation and, if applicable, future regulatory review.

Section 5. Program Design for 2027-2029

This section describes major program design elements of ConnectedSolutions and highlights proposed program design modifications for 2027-2029. This section is not intended to be comprehensive of all program design detail; such detail is developed and made available in advance of each peak demand season, annually.

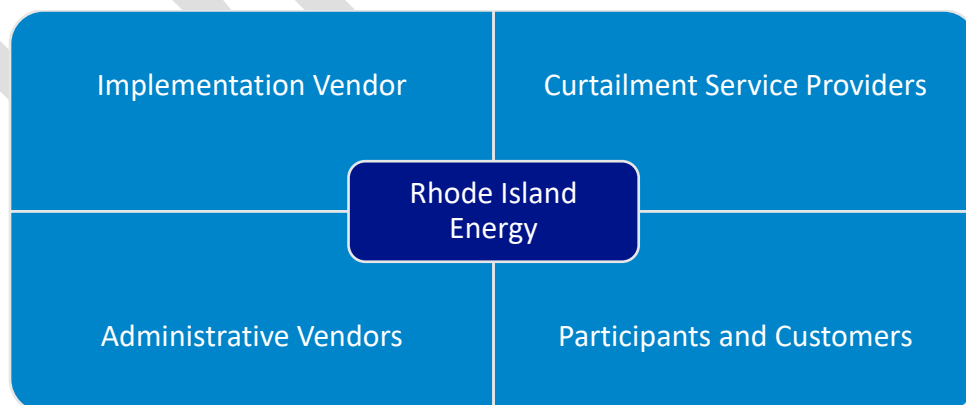
5.1 Administration

5.1.1 Rhode Island Energy's Role:

Rhode Island Energy serves as the Program Administrator, providing strategic direction and management of ConnectedSolutions. Rhode Island Energy determines its proposed annual procurement schedule of peak demand reduction and administers the program through which that peak demand reduction is procured. Rhode Island Energy is uniquely suited for this role because of its expertise in wholesale energy and capacity markets, knowledge of its electric distribution system, everyday relationship with its customers to promote program participation, relationships that enable coordination with other electric distribution companies regionally, and ability to coordinate demand response with all other business activities.

5.1.2 Implementation Vendor:

Rhode Island Energy contracts with a third-party solution provider that offers software-as-a-service to implement day-to-day program operations. This implementation vendor is responsible for managing relationships and contracts with technology providers, in order to enable those technologies to participate in ConnectedSolutions (or, more precisely, to enable customers who have those particular technology types and models to enroll and participate). The implementation vendor also assists with data collection, participant enrollment, program impact evaluation, participant satisfaction, troubleshooting, incentive payouts, and ancillary technical assistance. Contracting with a vendor for these roles allows Rhode Island Energy and its customers to benefit from the innovation and price competition within the competitive market for demand response implementation.



5.1.3 Curtailment Service Providers:

Rhode Island Energy and its implementation vendor work with a network of curtailment service providers. These curtailment service providers manage relationships with commercial and industrial customers under their own, independent contracts for value-sharing to which Rhode Island Energy is not party. However, curtailment service providers are essential to the ecosystem of ConnectedSolutions so that they align their support for commercial and industrial customers with Rhode Island Energy's calls for peak demand reduction.

5.1.4 Administrative Vendors:

Rhode Island Energy contracts with additional vendors to support administrative functions, including but not limited to, administering financing interest buy-down incentives.

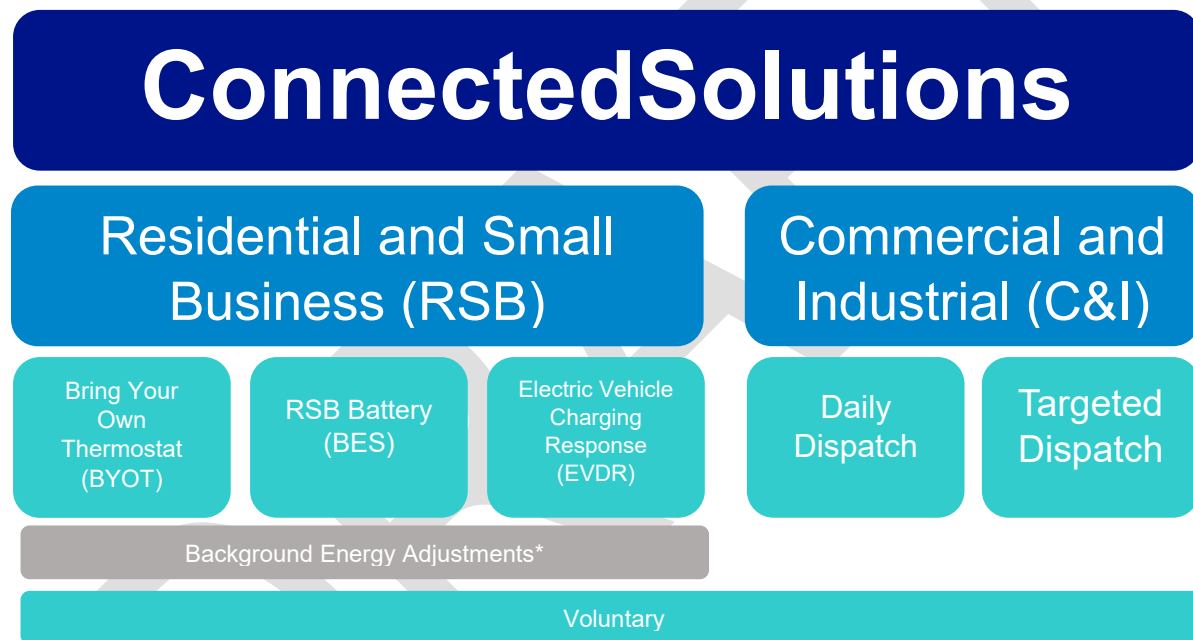
5.1.5 Participants and Customers:

Rhode Island Energy designs ConnectedSolutions such that all customers benefit regardless of participation; however, these benefits only materialize if a subset of customers participate in the program. A participant not only receives the value that accrues to all customers regardless of participation, but also receives an incentive payment for their participation and/or performance.

5.2 ConnectedSolutions Program Structure

The program structure of ConnectedSolutions is illustrated in Figure 1, below.

ConnectedSolutions as a whole is referred to as a “program.” ConnectedSolutions has two “tracks” through which customers may participate: Residential and Small Business (“RSB”) and Commercial and Industrial (“C&I”). Each of these tracks contains multiple “pathways” for participation. Participants in the RSB track can participate via the Bring Your Own Thermostat (“BYOT”) pathway, the RSB Battery (“BES”) pathway, and the Electric Vehicle Demand Response (“EVDR”) pathway. RSB customers can also participate in the Background Energy Adjustments functionality. Participants in the C&I track can participate in the Daily Dispatch pathway and/or the Targeted Dispatch pathway. All customers – residential, small business, commercial, and industrial customers – can participate in the Voluntary pathway.



Notes: ConnectedSolutions is a ‘program’ (shown in navy) with two ‘tracks,’ the Residential and Small Business track and the Commercial and Industrial track (shown in blue). Each track has a number of ‘pathways’ through which to participate (shown in teal). An ‘operational enhancement’ (shown in gray), called Background Energy Adjustments represents customer -authorized device optimization, enabled through participating original equipment manufacturers (OEMs) and device settings.

*Background Energy Adjustments are automated load reductions enabled through customer-authorized OEM device settings and optimization capabilities. The resources support ConnectedSolutions objectives but do not require direct customer enrollment in ConnectedSolutions. Devices participating in Background Energy Adjustments are not eligible to simultaneously participate in the BYOT pathway.

Stakeholders have noted the importance of expected cash flows in financial planning and procurement decisions for some demand response investments, like battery energy storage systems. In prior program years, the Company had advertised a “five-year rate lock” whereby

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participants could expect to receive the same incentive levels as their first year of enrollment in years two through five. Although the Company intended and continues to intend to honor five years of consistent incentive rates, the Company obtained funding for ConnectedSolutions on a more frequent annual basis. The term “five-year rate lock” obscured this annual proposal and approval process, which introduced risk into the market for years beyond the annual regulatory approved year. Beginning in 2024, the Company attempted to provide more clarity and transparency with transitioning to the term “multiyear incentive rate.” By removing the word “lock,” the Company intended to make it clearer that incentive levels offered past the current proposal are subject to change. The Company proposes its incentive rates to be the same for the multi-year plan timeframe subject to and in compliance with the normal proposal and oversight process and LCP Standards. Although the Company intends to maintain incentive levels for the three-year implementation plan timeframe the Company explicitly reserves the right to amend incentive levels if warranted. To offset potential perceived reduction in certainty from potential participants, the Company is extending the duration for which it is proposing and requesting approval for ConnectedSolutions (proposing for three years instead of one year). Additional detail for affected pathways is provided below.

Furthermore, the Company proposes extending the Demand Response Event window by one hour, from 3:00 p.m. to 9:00 p.m., to better align with observed and anticipated ISO-NE system peak conditions and ensure the program remains capable of delivering load reductions during periods of greatest system need.

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5.3 Residential and Small Business (“RSB”) Track

To participate in the RSB track, customers must be in rate classes A-16, A-60, or C-06; customers in other rate classes are ineligible to participate in the RSB track.³ Participants in the RSB track may stack incentives through setting back thermostats, discharging battery energy storage systems, curtailing electric vehicle charging, or voluntarily pre-loading or deferring electricity consumption.

Participation in the RSB track relies primarily on automated, technology-enabled demand response to reduce regional coincident peak demand. To support reliable performance and ease of participation, the Company proposes to continue and expand the use of automated device control, including background energy adjustment capabilities. These capabilities enhance consistency of peak demand reduction while maintaining voluntary participation, customer override options, and established notification practices.

Incentive structures, levels, and eligibility requirements are discussed further below.

³ Customers in the C-06 rate class will be provided the flexibility to choose to participate in either the Residential track or the Commercial track at the beginning of each season. They may not participate in both tracks at the same time or switch to a different track midseason.

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5.3.1 Bring Your Own Thermostat (“BYOT”)

Residential and small business customers may enroll eligible devices in the BYOT pathway. During peak periods, connected thermostats will automatically increase target cooling levels, thereby reducing demand of central air conditioning units or central heat pumps. Eligibility is defined by thermostat manufacturers and model, as determined by the implementation vendor.

Incentive structure and amount:

Eligible participants receive a one-time enrollment incentive of \$50 per enrolled device, followed by an annual participation incentive of \$20 per device per year, to be rendered at the end of the peak season only for customers who participate in at least one full peak event.

Proposed Changes for Bring Your Own Thermostats Pathway

Rhode Island Energy proposes to provide an annual participation incentive of \$20 per device per year only to customers who participate in at least one full peak event, rather than providing the incentive to all enrolled customers.

5.3.2 Residential and Small Business (“RSB”) Battery

During peak periods, battery energy storage systems discharge electricity to serve on-site load and export electricity to the electric distribution system for neighboring customers to use, thereby reducing peak demand.

Eligibility

Residential and small business customers may enroll. Batteries that participate must be from eligible manufacturers (as specified in program documentation). Incentive payments will be capped at \$6,875 per year, which represents an incentive for a battery that reduces regional coincident peak load by 25 kW per peak event on average.

Incentive structure and amount:

Newly eligible participants receive an annual performance incentive of \$200 per average peak kilowatt reduced per peak event per year, to be rendered at the end of the peak season for all participants. It is Rhode Island Energy’s intention to offer this multiyear incentive rate for this three-year implementation plan. Incentive levels after 2029 are subject to review and approval.

Participants who complete their initial five-years of enrollment during 2027-2029 will transition to an annual performance incentive of \$200 per average peak kilowatt reduced per peak event per year.

All customers may benefit from complementary state programs that support battery energy storage adoption, including incentives available through OER’s ESR Program. Low-income eligible participants may additionally opt to leverage the HEAT Loan to support financing their battery energy storage systems. The HEAT Loan provides low-interest rate financing, with zero-percent interest financing available to some customers based on income eligibility. The Company considered the availability of such complementary incentives when developing the proposed battery incentive levels and the overall program budget.

Changes for the RSB Battery Pathway

In accordance with the program design principle to right-size incentive levels, Rhode Island Energy is proposing to change the amount of the performance incentive. Under prior program design, participants received \$400 or \$225 per average kilowatt reduced per peak event per year. The new incentive will allow new participants to receive \$200 per average kilowatt reduced per peak event per year during the 2027-2029 implementation period.

Participants completing their 5-year of enrollment before or during the 2027-2029 period would transition to the existing \$200 per average kilowatt reduced per peak event per year.

Rhode Island Energy proposes to continue HEAT loan eligibility for low-income eligible customers and to coordinate with OER to help customers understand available resources that may reduce upfront costs and encourage participation in ConnectedSolutions. This program design modification substantially reduces the cost to procure peak demand reduction through battery energy storage dispatch, thereby growing value in terms of reduced customer electric bills.

System Reliability Procurement Investment Proposal for Electric Demand Response 2027-2029

Incentive payout schedule

Table 1, table below illustrates the incentive rate a participant is eligible to receive based on the year they first enrolled and began participating in ConnectedSolutions. To use the table, locate the participant's enrollment cohort in the left-hand column (Column A) and read across the row to identify the applicable incentive rate by participation year.

Participants enrolled on or before May 31, 2024 remain eligible for the previously established five-year rate lock. Participants enrolled on or after June 1, 2024 and before June 1, 2027 are eligible for the proposed \$225/kW multi-year incentive rate through 2029. Participants enrolling on or after June 1, 2027, as well as participants who have completed their applicable five-year or multi-year incentive rate, are eligible for the proposed \$200/kW incentive rate. Incentive levels after 2029 remain subject to future review, approval, and program availability.

Table 1. Battery energy storage dispatch incentive schedule

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
Customer enrolled with a newly installed battery and begun peak season participation...	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
2019-2022	Incentive level provided for Multi-Year Incentive Rate								\$200		
2023	-	-	-	-	\$400				\$400	\$200	
2024 (Participants enrolled on or before May 31, 2024)	-	-	-	-	-	\$400			\$400		\$200
2024 (Participants enrolled on or after June 1, 2024)	-	-	-	-	-	\$225			\$225		\$200
2025	-	-	-	-	-	-	\$225		\$225		
2026	-	-	-	-	-	-	-	\$225	\$225		
2027 (Participants enrolled on or after June 1, 2027)	-	-	-	-	-	-	-	-	\$200		
2028	-	-	-	-	-	-	-	-	-	\$200	
2029	-	-	-	-	-	-	-	-	-	-	\$200

**Incentives are based on a participant's average kW reduction during all ConnectedSolutions dispatch events. Notes: If a customer enrolls mid-season, that system will receive 0 kW as performance for any missed events but will be allowed to earn performance on any remaining events of that season. Note that for all customers, incentives will be set in three-year periods "2027-2029". *During the next three-year review, the incentives may be re-evaluated and adjusted based on market conditions for the Program Period 2030-2033. All incentives are subject to review and oversight.*

5.3.3 Electric Vehicle Demand Response (“EVDR”)

Residential and small business customers may enroll eligible devices in the EVDR pathway. During peak periods, connected EVs or EV Chargers will automatically curtail charging. Eligibility is defined by EV and EV Charger manufacturers and models, as defined by the implementation vendor.

Incentive structure and amount:

Eligible participants receive a one-time enrollment incentive of \$50 per enrolled device, followed by an annual participation incentive of \$20 per device per year, to be rendered at the end of the peak season only for customers who participate in at least one full peak event.

Changes for the EVDR Pathway

Rhode Island Energy proposes to provide an annual participation incentive of \$20 per device per year only to customers who participate in at least one full peak event, rather than providing the incentive to all enrolled customers.

5.3.4 Background Energy Adjustments

The Company proposes implementing background energy adjustments as an operational enhancement to the ConnectedSolutions portfolio. It will enable the Company to recognize, align, and account for energy reductions that are already being achieved through customer-authorized device optimization features offered by participating original equipment manufacturers (“OEMs”).

A few OEMs available in the market today include optional energy optimization capabilities that customers may voluntarily enable during device installation, setup, or ongoing device management. These capabilities allow OEMs to make small automated adjustments designed to reduce or shift electricity consumption.

For eligible thermostats, these adjustments may include small temperature offsets typically between 0.5°F and 2°F, that occur in the background based on OEM optimization functionality and customer comfort preferences. Customers voluntarily enable these settings directly through their OEM and do not directly enroll in ConnectedSolutions.

System Value:

By incorporating background energy adjustments, the Company can recognize and account for the electricity consumption reduction benefits already being enabled by participating devices in customer homes. By incorporating this operational enhancement, the Company can better coordinate these adjustments with scheduled ConnectedSolutions events, creating a more aligned and predictable demand response portfolio while enhancing overall program performance and system value.

Participating devices are aggregated and automatically dispatched during peak events. The Company will initially launch the opportunity for eligible connected thermostats and has the potential to expand to other market-ready devices. Participation forecasts were informed by available OEM data regarding customer consent of energy optimization settings.

New Pathway!

This is a new pathway that has not been available to customers in prior years.

Offers reliable grid resources with devices already enabled and ready to be deployed now!

How it works: a thermostat learns a customer is comfortable at 72°F and occasionally adjusts to 73°F during a peak period through settings the customer already agreed to with the device OEM. ConnectedSolutions coordinates events and captures the resulting grid benefits.

System Reliability Procurement Investment Proposal for Electric Demand Response 2027-2029

Rhode Island Energy continues to prioritize growth in the BYOT pathway and views background energy adjustments as an opportunity to capture incremental demand reduction from customers who are not enrolled in incentive-based BYOT pathway. Background energy adjustments will improve the reliability and predictability of peak demand reduction by enabling consistent device response across peak events, while preserving customer choice.

Customer Experience:

Customers consent directly through their OEM relationship and agree to small automated adjustments designed to reduce electricity consumption. Customers often choose to enable OEM energy optimization features because they are marketed as comfort, energy savings, sustainability, or convenience features.

For an eligible connected thermostat, the OEM may present the customer with an optional energy optimization feature, shown in **Error! Reference source not found..**

At the same time the customer may be presented with an incentive earning opportunity, shown in Figure 2. Nest Rush Hour Rewards (ConnectedSolutions BYOT) Offer .

Under ConnectedSolutions BYOT, the customer explicitly enrolls in the ConnectedSolutions program and agrees to the applicable program terms. Rhode Island Energy schedules demand response events through its implementation platform, and enrolled customers receive the applicable ConnectedSolutions incentive for participation.

For both options, participation is voluntary and customers remain in control. Customers may receive an in-app or on-device notification and may override an adjustment or opt out of events at any time. For Background Energy Adjustments, Rhode Island Energy proposes to align eligible OEM-enabled adjustments with ConnectedSolutions event periods and measure performance on an aggregate basis.

Figure 1. Nest Energy Shift (Background Energy Adjustment) Offer

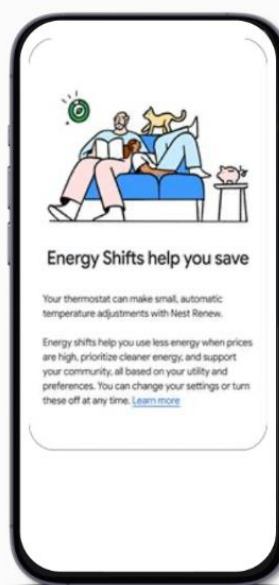
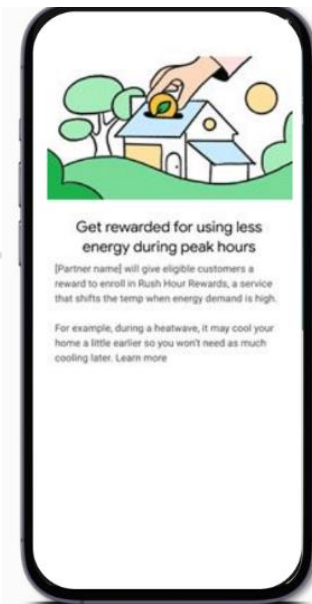


Figure 2. Nest Rush Hour Rewards (ConnectedSolutions BYOT) Offer



Topic	Additional Information
Customer Consent or	Through OEM's device platform, not a direct ConnectedSolutions enrollment
Incentive	No ConnectedSolutions incentive; OEM may determine its own incentives

System Reliability Procurement Investment Proposal for Electric Demand Response 2027-2029

Load Reduction	Load reduction measured as an aggregate, not per device
Double counting	Devices will not be able to enroll in both the ConnectedSolutions BYOT pathway and background energy adjustments
Rhode Island Energy Territory	Customers in the two zip codes (02807 and 02859) are not uniquely served by RIE, therefore will not be included in background energy adjustments
Customer control	Customers have the option to override or opt-out of an event

Incentive structure and amount:

Customers do not receive an incentive amount of any kind from Rhode Island Energy. The device OEM may decide to provide monetary incentives.

System Reliability Procurement Investment Proposal for Electric Demand Response 2027-2029

5.3.5 Voluntary

Rhode Island Energy proposes continuing the Voluntary pathway during the 2027-2029 program period. This pathway encourages customers to voluntarily reduce electricity consumption during peak events through any means or technology, without requiring enrollment or the use of specific devices.

Incentive structure and amount:

Voluntary demand response will not provide any direct monetary incentive to participants for peak demand reduction, although all customers will benefit through downward pressure on electricity costs.

Notes about program design:

Rhode Island Energy will communicate about voluntary calls for demand response using its social media channels and via a banner on its webpage. Rhode Island Energy anticipates posting 2-3 calls for voluntary demand response during the peakiest peaks each year. Rhode Island Energy recognizes the power of its communication channels; calling events too frequently or through unwanted channels may threaten participation and effective communications during rare times of emergency. Therefore, Rhode Island Energy will never call more than three voluntary demand response events in a given year.

Rhode Island Energy recognizes the power of crowd sourcing and proposes to use its growing digital presence to encourage peak demand reduction.

Rhode Island Energy does not propose to claim any savings from its voluntary efforts during 2027-2029 for the purposes of shareholder incentives; 100% of the value will go to customers.

Last, Rhode Island Energy recognizes the advocacy groups that have paved the way for voluntary calls for demand response in previous years – thank you for helping us see the value! We hope to work together to amplify our messages in the future.

5.4 Commercial and Industrial (“C&I”) Track

To participate in the C&I track, customers must be in rate classes C-06, G-02 or G-32; customers in other rates classes are ineligible to participate in the C&I track. Customers in the C-06 rate class may participate in either the RSB or C&I track, but they may not participate in both tracks at the same time or switch to a different track midseason. Participants in the C&I track may participate in either Daily Dispatch, Targeted Dispatch, or both (referred to as “dual enrollment”).

Both Daily Dispatch and Targeted Dispatch are technology agnostic. These programs offer flexible avenues of participation that accommodate more complex technologies (e.g., building automation systems, complex lighting controls, etc.) and processes (e.g., deferring production). Furthermore, peak demand reduction achieved through battery energy storage dispatch and electric vehicle demand response are eligible through both C&I pathways.

All peak demand reduction must be environmentally responsible, per LCP Statute and Standards. Therefore, fossil-fueled backup generators are only eligible to count toward performance for the 2027-2029 ConnectedSolutions seasons if they were enrolled in the program as of the 2026 season and have an active Operating Permit or Minor Source/Preconstruction Permit from the Rhode Island Department of Environmental Management (“RIDEM”).⁴ Additional guidance and requirements on eligible technologies and fuels will be provided in program documentation prior to each season.

Participants may earn incentives based on actual performance, up to \$1 million per participant per year. Incentive structures, levels, and eligibility requirements are discussed further below. This \$1 million incentive cap applies to all ConnectedSolutions participants, even participants eligible for the Daily Dispatch \$300/kW rate lock or the Daily Dispatch \$275/kW multiyear incentive rate. Customers participating with battery storage assets may benefit from

Proposed Changes

Rhode Island Energy recognizes the growing interest in battery energy storage for commercial and industrial customers. By combining battery energy storage as an eligible peak reduction pathway in Daily Dispatch and Targeted Dispatch, Rhode Island Energy intends for program participation to be streamlined and compensated according to desired participation level.

Rhode Island Energy also seeks to support an environmentally responsible program by disallowing new fossil-fuel based resource enrollments during the 2027-2029 program period.

In addition, Rhode Island Energy proposes implementing a C&I Performance Factor to better align participant compensation with realized system value and strengthen accountability for delivered load reduction.

Last, Rhode Island Energy proposes to reduce the Daily Dispatch pathway incentive level in order to drive more avoided electric bill costs.

System Reliability Procurement Investment Proposal for Electric Demand Response 2027-2029

complementary state programs that support battery energy storage adoption, including incentives available through OER's ESR Program.

In addition, Rhode Island Energy proposes implementing a Daily Dispatch Performance Factor beginning in the 2027–2029 program period to promote consistent and reliable participant performance while optimizing utilization of available program funding. The Performance Factor would apply only to participants enrolled in the Daily Dispatch pathway and would not apply to Targeted Dispatch participants. Rhode Island Energy proposes maintaining Targeted Dispatch without a Performance Factor due to its lower incentive level and more limited event frequency, preserving it as a flexible participation option for customers with less predictable curtailment capabilities.

Lastly, Rhode Island Energy proposes reducing the Daily Dispatch incentive level from \$275 per kilowatt to \$200 per kilowatt to support customer participation while maximizing customer value and maintaining compliance with LCP principles. The proposed reduction was developed based on an evaluation of avoided electric bill costs, historical program experience, expected participation, and overall program cost-effectiveness. The Company seeks to right-size incentives and balance participant compensation with the value created for Rhode Island customers through avoided electric system and supply cost reductions. As a result, incentive levels are established based on the value of peak demand reduction and overall program cost-effectiveness, rather than the economics of any individual technology type.

System Reliability Procurement Investment Proposal for Electric Demand Response 2027-2029

5.4.1 Daily Dispatch

Commercial and industrial customers may enroll in the Daily Dispatch pathway. Daily Dispatch incentivizes participants on a pay-for-performance basis to curtail their electricity demand during the one peak grid load hour of the year, as well as other high and medium peak days in June through September, for a total of no more than 60 events.

Incentive structure and amount:

New participants earn a performance incentive of \$200 per kW reduced on average during peak events. It is Rhode Island Energy's intention to offer this multiyear incentive rate for the first five years for new participants, however incentive levels after 2029 are subject to review and approval.

For any Daily Dispatch event in which a participant has a negative load shed, that negative performance will be included in the calculation of the participant's overall average performance for the season. If the participant's overall average performance is a negative value, then the participant will receive no incentive payment for that season.

Multiyear Incentive Rate for Daily Dispatch

Rhode Island Energy offers a multiyear incentive rate for Daily Dispatch participants, which is intended to preserve a participant's Daily Dispatch incentive rate for the first five seasons of enrollment, even if the incentive rate offered to new participants changes during that period. **Error! Reference source not found.**, below, describes the annual eligible incentive rate for participants depending on year of first enrollment and participation. Note that Rhode Island Energy plans to honor the \$300 per kW five-year rate lock for Daily Dispatch customers who enrolled during or prior to the 2023 season through 2029, as well as the \$275 per kW multiyear incentive rate for Daily Dispatch customers who enrolled during or prior to the 2026 season through 2029. Also, please note that the multiyear incentive offering represents Rhode Island Energy's intentions. ConnectedSolutions program funding and incentive levels are subject to regulatory review and approval, and Rhode Island Energy cannot guarantee incentive levels beyond the program years for which regulatory approval has been granted.

Proposed changes

Rhode Island Energy proposes to implement a Performance Factor following a tiered incentive structure to adjust performance incentive payments evaluated by the average seasonal delivered load shed versus the enrolled load shed.

In addition, Rhode Island Energy proposes to reduce the Daily Dispatch pathway incentive level from \$275 to \$200 per kilowatt reduced on average during peak events for new 2027-2029 enrollments.

2-Year Incentive Commitment Letter

For new battery storage systems larger than 50 kW-AC that do not yet have authority to interconnect, the customer or their vendor can choose to request a 2-year Incentive Commitment Letter from Rhode Island Energy once an interconnection application has been accepted as complete.

The Commitment Letter will reserve the incentive rate for the customer during the construction, installation, and interconnection of the battery system for up to a maximum of two years, through the 2029 peak season.

When the participant receives authority to interconnect and enrolls in Daily Dispatch, their incentive rate will be the amount committed to in the Commitment Letter, even if the incentive rate has decreased during the construction, installation, and interconnection period or two years, whichever is shorter.

Please note that the Commitment Letter and multiyear incentive rate represent Rhode Island Energy's intentions and are subject to applicable regulatory review and approval. Incentive levels are not guaranteed beyond the approved program period and may be reevaluated and adjusted during subsequent three-year planning cycles.

Performance Factor for Daily Dispatch

The Daily Dispatch Performance Factor would be determined based on the relationship between a participant's realized average load shed and enrolled load shed over the season. Participants would be assigned to one of three performance tiers, as shown in Figure 2 below. Participants achieving between 70% and 130% of enrolled load shed (Tier A) would receive 100% of their calculated performance incentive, with incentive payments capped at 130% of enrolled load shed. Participants achieving between 20% and 69% of enrolled load shed (Tier B) would receive 80% of their calculated performance incentive, while participants achieving less than 20% of enrolled load shed (Tier C) would receive 50% of their calculated performance incentive.

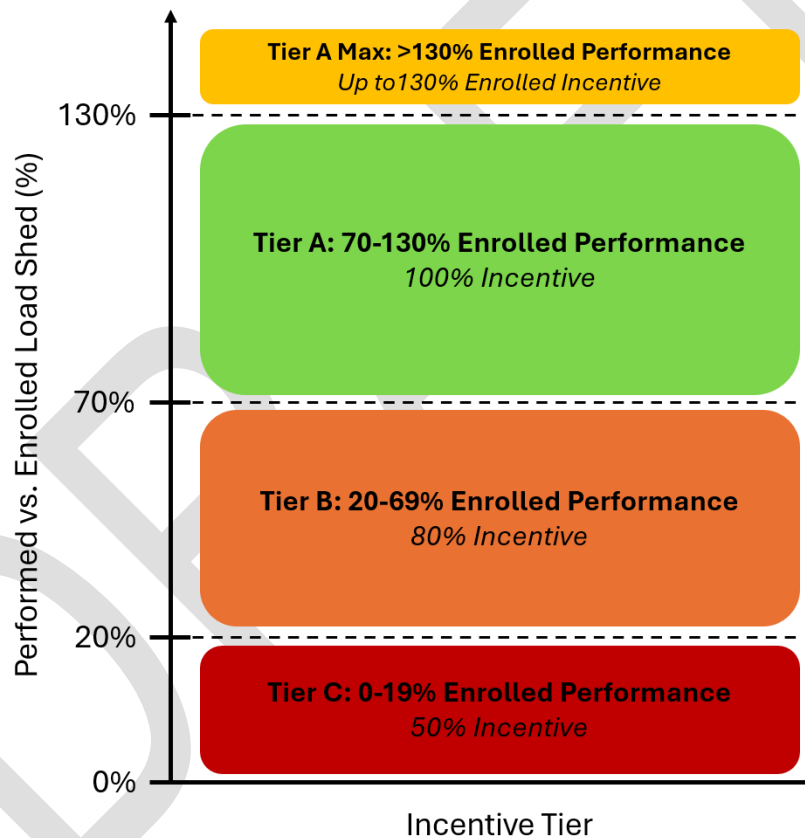
For all Daily Dispatch participants, the Performance Factor would be evaluated and applied at the individual participant level.

To facilitate a smooth transition and provide participants with an opportunity to understand the new framework, Rhode Island Energy proposes treating the 2027 program year as a grace period. During the 2027 season, all Daily Dispatch participants would continue to receive 100% of their calculated incentive payments based on realized average hourly load shed, regardless of Performance Factor results. Rhode Island Energy would provide each CSP and Direct Participant with a performance scorecard illustrating their applicable Performance Factor tier and the incentive payment that would have been received had the Performance Factor been in effect. Full implementation of the Daily Dispatch Performance Factor would begin in the 2028 program year and continue through 2029.

System Reliability Procurement Investment Proposal for Electric Demand Response 2027-2029

To further improve enrollment accuracy, Rhode Island Energy proposes a mid-season enrollment nomination adjustment opportunity following the first three ConnectedSolutions events of each season. Participants and CSPs would have seven calendar days to request revisions to enrolled load shed nominations based on demonstrated performance. The Company may also use this opportunity to accept previously deferred enrollments if program capacity becomes available. For participants whose enrollment was initially deferred due to program capacity or budget constraints, events occurring prior to enrollment would be excluded from performance calculations rather than assigned a zero-kW performance value. Existing program guidelines regarding missed events prior to enrollment would continue to apply to all other mid-season enrollments.

Figure 2: Daily Dispatch Performance Factor



System Reliability Procurement Investment Proposal for Electric Demand Response 2027-2029

Incentive Payout Schedule

Table 2 below illustrates the incentive rate a participant is eligible to receive based on the year they first enrolled and began participating in the ConnectedSolutions Daily Dispatch pathway. To use the table, locate the participant's enrollment cohort in the left-hand column (Column A) and read across the row to identify the applicable incentive rate by participation year.

Participants enrolled on or before May 31, 2024 remain eligible for the previously established five-year rate lock. Participants enrolled on or after June 1, 2024 and before September 30, 2026 are eligible for the proposed \$275/kW multi-year incentive rate through 2029. Participants enrolling on or after April 1, 2027, as well as participants who have completed their applicable five-year or multi-year incentive rate, are eligible for the proposed \$200/kW incentive rate. Incentive levels after 2029 remain subject to future review, approval, and program availability.

Table 2. Daily Dispatch incentive schedule

(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	(L)
Customer enrolled in Daily Dispatch and begun peak season participation...	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
2019-2022	Incentive level provided for Multi-Year Incentive Rate*								\$200		
2023	-	-	-	-	\$300				\$300	\$200	
2024 (Participants enrolled on or before May 31, 2024)	-	-	-	-	-	\$300			\$300		\$200
2024 (Participants enrolled on or after June 1, 2024)	-	-	-	-	-	\$275			\$275		\$200
2025	-	-	-	-	-	-	\$275		\$275		
2026 (Participants enrolled on or before September 30, 2026)**	-	-	-	-	-	-	-	\$275	\$275		
2027 (Participants enrolled on or after April 1, 2027)**	-	-	-	-	-	-	-	-	\$200		
2028	-	-	-	-	-	-	-	-	-	\$200	
2029	-	-	-	-	-	-	-	-	-	-	\$200

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*Incentives are based on a participant's average kW reduction during all ConnectedSolutions dispatch events. Beginning in 2028, the Daily Dispatch Performance Factor will also be applied to participants' incentive calculations.

**The 2026 ConnectedSolutions season officially concludes on September 30, 2026. Customers may communicate their enrollment interest for the 2027 ConnectedSolutions season, but Rhode Island Energy cannot accept enrollments for the 2027 program year until regulatory approval is granted for the 2027-2029 ConnectedSolutions seasons. The Company anticipates receiving regulatory approval in advance of the April 1, 2027 open enrollment date for the 2027 ConnectedSolutions season.

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System Reliability Procurement Investment Proposal for Electric Demand Response 2027-2029

5.4.2 Targeted Dispatch

Commercial and industrial customers may enroll in the Targeted Dispatch pathway. Targeted Dispatch incentivizes participants on a pay-for-performance basis to curtail their electricity demand during the one peak load hour of the year and other high peak days in June through September, for a total of no more than eight events.

Incentive structure and amount:

Participants earn a performance incentive of \$35 per kW reduced on average during peak events. For any Targeted Dispatch event in which a participant has a negative load shed, that negative performance will be included in the calculation of the participant's overall average performance for the season. If the participant's overall average performance is a negative value, then the participant will receive no incentive payment for that season.

Proposed changes

Rhode Island Energy does not propose any changes to the Targeted Dispatch pathway during the 2027-2029 program years.

System Reliability Procurement Investment Proposal for Electric Demand Response 2027-2029

5.5 Winter Demand Response

New England's system peak has historically been summer-driven. ISO New England's long-term forecasts project increasing electricity demand and, by 2035, the winter 50/50 net peak will nearly match the summer 50/50 net peak (ISO Newswire, 2026). Electrification of heating and transportation is expected to increase winter demand and system stress over time. These evolving system conditions suggest that winter demand response may become a relevant component to future system reliability strategies.

Rhode Island Energy seeks to proactively assess the potential role of demand response in addressing emerging winter system needs. At the same time, the Company recognizes that winter demand response is an evolving capability that requires additional evaluation, planning and design prior to any potential implementation.

Proposed Strategy for 2027-2029:

For the 2027-2029 implementation period, Rhode Island Energy proposes a measured, assessment-focused approach to winter demand response. The objective is to establish a foundational understanding of feasibility, potential system value, and market readiness, rather than implement or deploy winter dispatch.

This approach is consistent with program design principles of prudence, reliability, and cost-effectiveness, and reflects the need to develop sufficient insight before making investments in future implementation plans.

The Company's proposed strategy for 2027-2029 includes focusing on assessing the core elements required to support potential future winter demand response offerings.

Activities may include:

- Evaluate the feasibility of leveraging existing ConnectedSolutions pathways for winter;
- Identify which technologies and device types may be capable of contributing to winter peak reduction;
- Develop preliminary estimates of scale and potential load reduction capabilities;

New Program Foundation!

Rhode Island Energy proposes to introduce winter demand response ("Winter DR") during the 2027-2029 implementation plan through an "establish and validate" approach.

System Reliability Procurement Investment Proposal for Electric Demand Response 2027-2029

- Consider high-level program design elements, including event triggers, customer and device eligibility and incentive structure(s).

This work will leverage the existing ConnectedSolutions framework while adapting program parameters to account for the distinct characteristics of winter load.

Positioning for Future Implementation Plans (2030-2033)

The intention of the 2027-2029 assessment period is to support informed decision-making regarding potential future winter demand response offerings. By the end of the period, Rhode Island Energy expects to have:

- Identified candidate pathways and technologies for winter demand response;
- Developed preliminary estimates of achievable load reduction;
- Assessed market and device readiness; and
- Established a basis for evaluating cost-effectiveness relative to other system solutions.

These insights will inform whether and how to scale winter demand response in the 2030-2033 plan. Rhode Island Energy's approach is to proactively prepare for evolving system conditions while ensuring that any future program development is supported by sufficient data, analysis, and demonstrated value. We don't want to wait until winter peaks occur, we want to take a proactive approach so we can support both current summer peaks and future winter system needs.

Rhode Island Energy does not propose to claim peak demand reduction or avoided costs associated with winter demand response during the 2027–2029 period.

Section 6. Annual Participation, Peak Reduction, and Benefit-Cost Assessment

Rhode Island Energy offers the following offers the following program participation and peak load reduction targets in Table 3, below.

Table 3. 2027-2029 Participation and peak load reduction targets

Residential and Small Business Track		Participants/Devices Target			Peak Load Reduction Target Resource Size (MW)
	Average Load Reduction per Device (kW)	2027	2028	2029	
BYOT	0.64	18,900	20,500	22,600	13.0
RSB Battery	5.80	1,607	2,231	2,789	9.0
EVDR	0.32	1,254	1,806	2,528	0.4
Background Energy Adjustments	0.29	12,321	13,553	14,908	2.0
Commercial and Industrial Track		Load Reduction Target (kW)			
		2027	2028	2029	
Daily Dispatch		18,117	23,308	25,156	
Targeted Dispatch		15,111	16,091	17,135	

Notes: The table shows anticipated projections for participation in and peak load reduction resulting from ConnectedSolutions in 2027-2029.

Rhode Island Energy is targeting to deliver this range of participation and associated load reduction for the projected budget in

Table 4, below.

System Reliability Procurement Investment Proposal for Electric Demand Response 2027-2029

Table 4. 2027-2029 Projected programmatic budget

Residential and Small Business Track	Budget			3-Year Budget
	2027	2028	2029	
BYOT	\$4,398,257	\$5,062,776	\$5,738,110	\$15,199,143
RSB Battery				
EVDR				
Background Energy Adjustments				
Commercial and Industrial Track	Budget			3-Year Budget
	2027	2028	2029	
Daily Dispatch	\$4,750,122	\$5,800,290	\$6,110,759	\$16,661,171
Targeted Dispatch				

Notes: The table shows projected budget for ConnectedSolutions in 2027-2029. Budget includes participant incentives (68-95 percent of total budget) and administration (5-32 percent of total budget, depending on pathway). Budget does not include regulatory allocation or shareholder incentive.

Section 7. Complete Budget, Performance Incentive, Funding Source

The Tables in Appendix 1 provide a complete summary of program costs, impacts, and benefits. Rhode Island Energy proposes to collect funding through the SRP Factor within the EE Charge.

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Appendices

- Appendix 1. Tables
- Appendix 2. Notes on Terminology
- Appendix 3. Legal and Regulatory Basis
- Appendix 4. Technical Appendix

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Appendix 1. Tables

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System Reliability Procurement Investment Proposal for Electric Demand Response 2027-2029

Table 1
Rhode Island Energy
2027 Demand Response Funding Sources

		Portfolio
(1)	Projected Budget	\$9,780,009
	Sources of Other Funding	\$0
(2)	Projected Fund Balance and Interest from Previous Year	\$0
(3)	Projected FCM Net Revenue from ISO-NE	\$0
(4)	Total Other Funding	\$0
(5)	Customer Funding Required	\$9,780,009
(6)	Forecasted kWh Sales	7,464,438,883
(7)	Demand Response Program Charge per kWh (Excluding Uncollectible Recovery)	\$0.00131
(8)	Proposed SRP Opex Factor per kWh (Excluding Uncollectible Recovery)	\$0.00000
(9)	Total Proposed Demand Response Charge per kWh (Excluding Uncollectible Recovery)	\$0.00131
(10)	Currently Effective Uncollectible Rate	1.3%
(11)	Proposed Demand Response Program Charge per kWh (Including Uncollectible Recovery)	\$0.00132

Notes:

- (1) Projected Budget includes regulatory costs which are forecasted by kWh sales.
- (2) Total Other Funding equals Line (2) + Line (3).
- (3) Customer Funding Required equals Line (1) – Line (4).
- (4) Demand Response Program Charge per kWh (Excluding Uncollectible Recovery) equals Line (5) ÷ Line (6), truncated to five decimal places.
- (5) Total Proposed Demand Response Charge per kWh (Excluding Uncollectible Recovery) equals Line (7) + Line (8).
- (6) Uncollectible rate confirmed in Docket No. 4770.
- (7) Proposed Demand Response Program Charge per kWh (Including Uncollectible Recovery) equals Line (9) ÷ (1 – Line (10)), truncated to five decimal places.

Table 2
Rhode Island Energy
2027 Demand Response Program Budget (\$000)

	Program Planning & Administration	Marketing	Rebates and Other Customer Incentives	Sales, Tech Assist & Training	Evaluation & Market Research	Performance Incentive	Grand Total	Grand Total without Heat Loan	Incremental Heat Loan Costs
Residential									
Residential ConnectedSolutions	\$155.9	\$10.0	\$3,006.6	\$1,225.8	\$0.0		\$4,398.3	\$4,375.8	\$22.5
Subtotal	\$155.9	\$10.0	\$3,006.6	\$1,225.8	\$0.0		\$4,398.3	\$4,375.8	\$22.5
Commercial & Industrial									
C&I ConnectedSolutions	\$83.6	\$1.0	\$4,465.5	\$200.0	\$0.0		\$4,750.1	\$4,750.1	\$0.0
Subtotal	\$83.6	\$1.0	\$4,465.5	\$200.0	\$0.0		\$4,750.1	\$4,750.1	\$0.0
Performance Incentive						\$467.0	\$467.0	\$467.0	\$0.0
Portfolio									
EERMC	\$0.0						\$0.0	\$0.0	\$0.0
OER	\$164.7						\$164.7	\$164.7	\$0.0
Subtotal	\$164.7						\$164.7	\$164.7	\$0.0
Grand Total	\$404.2	\$11.0	\$7,472.1	\$1,425.8	\$0.0	\$467.0	\$9,780.0	\$9,757.5	\$22.5

Notes:

- (1) OER budget is equal to 60% of 3% of System Benefits Charge (SBC) collections.
- (2) EERMC budget is equal to 40% of 0% of SBC collections.

System Reliability Procurement Investment Proposal for Electric Demand Response 2027-2029

Table 3
Rhode Island Energy
2028 Demand Response Funding Sources

		Portfolio
(1)	Projected Budget	\$11,659,293
	Sources of Other Funding	\$0
(2)	Projected Fund Balance and Interest from Previous Year	\$0
(3)	Projected FCM Net Revenue from ISO-NE	\$0
(4)	Total Other Funding	\$0
(5)	Customer Funding Required	\$11,659,293
(6)	Forecasted kWh Sales	7,462,707,221
(7)	Demand Response Program Charge per kWh (Excluding Uncollectible Recovery)	\$0.00156
(8)	Proposed SRP Opex Factor per kWh (Excluding Uncollectible Recovery)	\$0.00000
(9)	Total Proposed Demand Response Charge per kWh (Excluding Uncollectible Recovery)	\$0.00156
(10)	Currently Effective Uncollectible Rate	1.3%
(11)	Proposed Demand Response Program Charge per kWh (Including Uncollectible Recovery)	\$0.00158

Notes:

- (1) Projected Budget includes regulatory costs which are forecasted by kWh sales.
- (2) Total Other Funding equals Line (2) + Line (3).
- (3) Customer Funding Required equals Line (1) – Line (4).
- (4) Demand Response Program Charge per kWh (Excluding Uncollectible Recovery) equals Line (5) ÷ Line (6), truncated to five decimal places.
- (5) Total Proposed Demand Response Charge per kWh (Excluding Uncollectible Recovery) equals Line (7) + Line (8).
- (6) Uncollectible rate confirmed in Docket No. 4770.
- (7) Proposed Demand Response Program Charge per kWh (Including Uncollectible Recovery) equals Line (9) ÷ (1 – Line (10)), truncated to five decimal places.

System Reliability Procurement Investment Proposal for Electric Demand Response 2027-2029

Table 4

Rhode Island Energy

2028 Demand Response Program Budget (\$000)

	Program Planning & Administration	Marketing	Rebates and Other Customer Incentives	Sales, Tech Assist & Training	Evaluation & Market Research	Performance Incentive	Grand Total	Grand Total without Heat Loan	Incremental Heat Loan Costs
Residential									
Residential ConnectedSolutions	\$165.5	\$10.0	\$3,517.4	\$1,369.8	\$0.0		\$5,062.8	\$5,040.3	\$22.5
Subtotal	\$165.5	\$10.0	\$3,517.4	\$1,369.8	\$0.0		\$5,062.8	\$5,040.3	\$22.5
Commercial & Industrial									
C&I ConnectedSolutions	\$86.2	\$1.0	\$5,513.1	\$200.0	\$0.0		\$5,800.3	\$5,800.3	\$0.0
Subtotal	\$86.2	\$1.0	\$5,513.1	\$200.0	\$0.0		\$5,800.3	\$5,800.3	\$0.0
Performance Incentive						\$600.7	\$600.7	\$600.7	\$0.0
Portfolio									
EERMC	\$0.0						\$0.0	\$0.0	\$0.0
OER	\$195.5						\$195.5	\$195.5	\$0.0
Subtotal	\$195.5	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$195.5	\$195.5	\$0.0
Grand Total	\$447.2	\$11.0	\$9,030.5	\$1,569.8	\$0.0	\$600.7	\$11,659.3	\$11,636.8	\$22.5

Notes:

- (1) OER budget is equal to 60% of 3% of System Benefits Charge (SBC) collections.
- (2) EERMC budget is equal to 40% of 0% of SBC collections.

System Reliability Procurement Investment Proposal for Electric Demand Response 2027-2029

Table 5
Rhode Island Energy
2029 Demand Response Funding Sources

		Portfolio
(1)	Projected Budget	\$13,383,222
	Sources of Other Funding	\$0
(2)	Projected Fund Balance and Interest from Previous Year	\$0
(3)	Projected FCM Net Revenue from ISO-NE	\$0
(4)	Total Other Funding	\$0
(5)	Customer Funding Required	\$13,383,222
(6)	Forecasted kWh Sales	7,461,341,598
(7)	Demand Response Program Charge per kWh (Excluding Uncollectible Recovery)	\$0.00179
(8)	Proposed SRP Opex Factor per kWh (Excluding Uncollectible Recovery)	\$0.00000
(9)	Total Proposed Demand Response Charge per kWh (Excluding Uncollectible Recovery)	\$0.00179
(10)	Currently Effective Uncollectible Rate	1.3%
(11)	Proposed Demand Response Program Charge per kWh (Including Uncollectible Recovery)	\$0.00181

Notes:

- (1) Projected Budget includes regulatory costs which are forecasted by kWh sales.
- (2) Total Other Funding equals Line (2) + Line (3).
- (3) Customer Funding Required equals Line (1) – Line (4).
- (4) Demand Response Program Charge per kWh (Excluding Uncollectible Recovery) equals Line (5) ÷ Line (6), truncated to five decimal places.
- (5) Total Proposed Demand Response Charge per kWh (Excluding Uncollectible Recovery) equals Line (7) + Line (8).
- (6) Uncollectible rate confirmed in Docket No. 4770.
- (7) Proposed Demand Response Program Charge per kWh (Including Uncollectible Recovery) equals Line (9) ÷ (1 – Line (10)), truncated to five decimal places.

System Reliability Procurement Investment Proposal for Electric Demand Response 2027-2029

Table 6

Rhode Island Energy

2029 Demand Response Program Budget (\$000)

	Program Planning & Administration	Marketing	Rebates and Other Customer Incentives	Sales, Tech Assist & Training	Evaluation & Market Research	Performance Incentive	Grand Total	Grand Total without Heat Loan	Incremental Heat Loan Costs
Residential									
Residential ConnectedSolutions	\$165.4	\$6.0	\$4,008.7	\$1,558.1	\$0.0		\$5,738.1	\$5,715.6	\$22.5
Subtotal	\$165.4	\$6.0	\$4,008.7	\$1,558.1	\$0.0	\$0.0	\$5,738.1	\$5,715.6	\$22.5
Commercial & Industrial									
C&I ConnectedSolutions	\$88.7	\$1.1	\$5,821.0	\$200.0	\$0.0		\$6,110.8	\$6,110.8	\$0.0
Subtotal	\$88.7	\$1.1	\$5,821.0	\$200.0	\$0.0	\$0.0	\$6,110.8	\$6,110.8	\$0.0
Performance Incentive						\$1,321.1	\$1,321.1	\$1,321.1	\$0.0
Portfolio									
EERMC	\$0.0						\$0.0	\$0.0	\$0.0
OER	\$213.3						\$213.3	\$213.3	\$0.0
Subtotal	\$213.3	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$213.3	\$213.3	\$0.0
Grand Total	\$467.4	\$7.1	\$9,829.6	\$1,758.1	\$0.0	\$1,321.1	\$13,383.2	\$13,360.7	\$22.5

Notes:

- (1) OER budget is equal to 60% of 3% of System Benefits Charge (SBC) collections.
- (2) EERMC budget is equal to 40% of 0% of SBC collections.

System Reliability Procurement Investment Proposal for Electric Demand Response 2027-2029

Table 7

Rhode Island Energy

Calculation of 2027 Cost-Effectiveness (Avoided Electric Bill Costs) (\$000)

	RI Test Benefit / Cost	Total Benefit	Program Implementation Expenses	Participant Cost	Performance Incentive
Residential					
Residential ConnectedSolutions	1.85	\$8,119.3	\$4,398.3	\$0.0	
Subtotal	1.85	\$8,119.3	\$4,398.3	\$0.0	
Commercial & Industrial					
C&I ConnectedSolutions	1.20	\$5,698.7	\$4,750.1	\$0.0	
Subtotal	1.20	\$5,698.7	\$4,750.1	\$0.0	
Performance Incentive					\$467.0
Portfolio					
EERMC			\$0.0		
OER			\$164.7		
Subtotal			\$164.7		
Grand Total	1.41	\$13,817.9	\$9,313.1	\$0.0	\$467.0

Notes:

- (1) Total Benefits are based on avoided electric bill cost only.

System Reliability Procurement Investment Proposal for Electric Demand Response 2027-2029

Table 8

Rhode Island Energy

Calculation of 2028 Cost-Effectiveness (Avoided Electric Bill Costs) (\$000)

	RI Test Benefit / Cost	Total Benefit	Program Implementation Expenses	Participant Cost	Performance Incentive
Residential					
Residential ConnectedSolutions	1.94	\$9,810.5	\$5,062.8	\$0.0	
Subtotal	1.94	\$9,810.5	\$5,062.8	\$0.0	
Commercial & Industrial					
C&I ConnectedSolutions	1.22	\$7,059.6	\$5,800.3	\$0.0	
Subtotal	1.22	\$7,059.6	\$5,800.3	\$0.0	
Performance Incentive					\$600.7
Portfolio					
EERMC			\$0.0		
OER			\$195.5		
Subtotal			\$195.5		
Grand Total	1.45	\$16,870.0	\$11,058.6	\$0.0	\$600.7

System Reliability Procurement Investment Proposal for Electric Demand Response 2027-2029

Table 9

Rhode Island Energy

Calculation of 2029 Cost-Effectiveness (Avoided Electric Bill Costs) (\$000)

	RI Test Benefit / Cost	Total Benefit	Program Implementation Expenses	Participant Cost	Performance Incentive
Residential					
Residential ConnectedSolutions	1.98	\$11,349.2	\$5,738.1	\$0.0	
Subtotal	1.98	\$11,349.2	\$5,738.1	\$0.0	
Commercial & Industrial					
C&I ConnectedSolutions	1.28	\$7,839.0	\$6,110.8	\$0.0	
Subtotal	1.28	\$7,839.0	\$6,110.8	\$0.0	
Performance Incentive					\$1,321.1
Portfolio					
EERMC			\$0.0		
OER			\$213.3		
Subtotal			\$213.3		
Grand Total	1.43	\$19,188.2	\$12,062.1	\$0.0	\$1,321.1

System Reliability Procurement Investment Proposal for Electric Demand Response 2027-2029

Table 10

Rhode Island Energy

Calculation of 2027 Cost-Effectiveness (Societal Benefits, Excluding Economic) (\$000)

	RI Test Benefit / Cost	Total Benefit	Program Implementation Expenses	Participant Cost	Performance Incentive
Residential					
Residential ConnectedSolutions	2.40	\$10,554.6	\$4,398.3	\$0.0	
Subtotal	2.40	\$10,554.6	\$4,398.3	\$0.0	
Commercial & Industrial					
C&I ConnectedSolutions	1.25	\$5,922.3	\$4,750.1	\$0.0	
Subtotal	1.25	\$5,922.3	\$4,750.1	\$0.0	
Performance Incentive					\$467.0
Portfolio					
EERMC			\$0.0		
OER			\$164.7		
Subtotal			\$164.7		
Grand Total	1.68	\$16,476.8	\$9,313.1	\$0.0	\$467.0

System Reliability Procurement Investment Proposal for Electric Demand Response 2027-2029

Table 11

Rhode Island Energy

Calculation of 2028 Cost-Effectiveness (Societal Benefits, Excluding Economic) (\$000)

	RI Test Benefit / Cost	Total Benefit	Program Implementation Expenses	Participant Cost	Performance Incentive
Residential					
Residential ConnectedSolutions	2.60	\$13,174.0	\$5,062.8	\$0.0	
Subtotal	2.60	\$13,174.0	\$5,062.8	\$0.0	
Commercial & Industrial					
C&I ConnectedSolutions	1.32	\$7,680.0	\$5,800.3	\$0.0	
Subtotal	1.32	\$7,680.0	\$5,800.3	\$0.0	
Performance Incentive					\$600.7
Portfolio					
EERMC			\$0.0		
OER			\$195.5		
Subtotal			\$195.5		
Grand Total	1.79	\$20,854.0	\$11,058.6	\$0.0	\$600.7

System Reliability Procurement Investment Proposal for Electric Demand Response 2027-2029

Table 12

Rhode Island Energy

Calculation of 2029 Cost-Effectiveness (Societal Benefits, Excluding Economic) (\$000)

	RI Test Benefit / Cost	Total Benefit	Program Implementation Expenses	Participant Cost	Performance Incentive
Residential					
Residential ConnectedSolutions	2.75	\$15,752.6	\$5,738.1	\$0.0	
Subtotal	2.75	\$15,752.6	\$5,738.1	\$0.0	
Commercial & Industrial					
C&I ConnectedSolutions	1.47	\$9,001.4	\$6,110.8	\$0.0	
Subtotal	1.47	\$9,001.4	\$6,110.8	\$0.0	
Performance Incentive					\$1,321.1
Portfolio					
EERMC			\$0.0		
OER			\$213.3		
Subtotal			\$213.3		
Grand Total	1.85	\$24,754.0	\$12,062.1	\$0.0	\$1,321.1

System Reliability Procurement Investment Proposal for Electric Demand Response 2027-2029

Table 13

Rhode Island Energy

Summary of 2027 Avoided Electric Bill Costs by Program (\$000)

	Benefits (000's)											
	Total	Capacity				Energy						
		Summer Generation	Capacity DRIPE	Transmis sion	Distribution	Summer		Winter		Electric Energy DRIPE	Avoided RNS	Energy Price Arbitrage
						Peak	Off Peak	Peak	Off Peak			
Residential												
Residential ConnectedSolutions	\$8,119	\$979	\$2,435	\$586	\$2,720	\$13	\$0	\$0	\$0	\$0	\$1,257	\$129
Subtotal	\$8,119	\$979	\$2,435	\$586	\$2,720	\$13	\$0	\$0	\$0	\$0	\$1,257	\$129
Commercial & Industrial												
C&I ConnectedSolutions	\$5,699	\$25	\$62	\$711	\$3,302	\$0	\$0	\$0	\$0	\$0	\$1,525	\$73
Subtotal	\$5,699	\$25	\$62	\$711	\$3,302	\$0	\$0	\$0	\$0	\$0	\$1,525	\$73
Grand Total	\$13,818	\$1,004	\$2,497	\$1,297	\$6,023	\$13	\$0	\$0	\$0	\$0	\$2,782	\$202
Avoided Electric Bill Cost (\$/kW)		\$16.57	\$41.21	\$21.40	\$ 99.38	\$0.73	\$ -	\$0.00	\$0.00	\$ 0.02	\$ 45.90	\$ 13.87
										Total for RSB Batteries (\$/kW)		\$ 349.78
										Total for C&I Batteries (\$/kW)		\$ 183.54
										Total for Thermostats (\$/kW)		\$ 267.65
										Total for the Rest (\$/kW)		\$ 171.60

Notes:

- (1) Energy Values are for Thermostats only.
- (2) Energy Price Arbitrage only applies to Battery Pathways.

System Reliability Procurement Investment Proposal for Electric Demand Response 2027-2029

Table 14

Rhode Island Energy

Summary of 2028 Avoided Electric Bill Costs by Program (\$000)

	Benefits (000's)											
	Total	Capacity				Energy				Electric Energy DRIPE	Avoided RNS	Energy Price Arbitrage
		Summer Generation	Capacity DRIPE	Transmission	Distribution	Summer		Winter				
						Peak	Off Peak	Peak	Off Peak			
Residential												
Residential ConnectedSolutions	\$9,810	\$1,270	\$2,713	\$711	\$3,302	\$15	\$0	\$0	\$0	\$0	\$1,616	\$184
Subtotal	\$9,810	\$1,270	\$2,713	\$711	\$3,302	\$15	\$0	\$0	\$0	\$0	\$1,616	\$184
Commercial & Industrial												
C&I ConnectedSolutions	\$7,060	\$32	\$69	\$862	\$4,005	\$0	\$0	\$0	\$0	\$0	\$1,960	\$131
Subtotal	\$7,060	\$32	\$69	\$862	\$4,005	\$0	\$0	\$0	\$0	\$0	\$1,960	\$131
Grand Total	\$16,870	\$1,302	\$2,782	\$1,573	\$7,307	\$15	\$0	\$0	\$0	\$0	\$3,576	\$315
Avoided Electric Bill Cost (\$/kW)		\$18.12	\$38.70	\$21.89	\$101.65	\$0.77	\$ -	\$0.00	\$0.00	\$ 0.02	\$ 49.75	\$ 14.18
										Total for RSB Batteries (\$/kW)		\$ 348.13
										Total for C&I Batteries (\$/kW)		\$ 190.37
										Total for Thermostats (\$/kW)		\$ 269.66
										Total for the Rest (\$/kW)		\$ 178.73

Notes:

- (1) Energy Values are for Thermostats only.
- (2) Energy Price Arbitrage only applies to Battery Pathways.

System Reliability Procurement Investment Proposal for Electric Demand Response 2027-2029

Table 15

Rhode Island Energy

Summary of 2029 Avoided Electric Bill Costs by Program (\$000)

	Benefits (000's)											
	Total	Capacity				Energy				Electric Energy DRIPE	Avoided RNS	Energy Price Arbitrage
		Summer Generation	Capacity DRIPE	Transmission	Distribution	Summer		Winter				
						Peak	Off Peak	Peak	Off Peak			
Residential												
Residential ConnectedSolutions	\$11,349	\$1,541	\$2,815	\$841	\$3,903	\$15	\$0	\$0	\$0	\$0	\$1,999	\$235
Subtotal	\$11,349	\$1,541	\$2,815	\$841	\$3,903	\$15	\$0	\$0	\$0	\$0	\$1,999	\$235
Commercial & Industrial												
C&I ConnectedSolutions	\$7,839	\$36	\$65	\$947	\$4,398	\$0	\$0	\$0	\$0	\$0	\$2,252	\$142
Subtotal	\$7,839	\$36	\$65	\$947	\$4,398	\$0	\$0	\$0	\$0	\$0	\$2,252	\$142
Grand Total	\$19,188	\$1,577	\$2,880	\$1,787	\$8,301	\$15	\$0	\$0	\$0	\$0	\$4,251	\$377
Avoided Electric Bill Cost (\$/kW)		\$19.75	\$36.08	\$22.39	\$ 103.98	\$0.73	\$ -	\$ -	\$ -	\$ 0.02	\$ 53.25	\$ 14.51
										Total for RSB Batteries (\$/kW)		\$ 343.13
										Total for C&I Batteries (\$/kW)		\$ 194.40
										Total for Thermostats (\$/kW)		\$ 269.28
										Total for the Rest (\$/kW)		\$ 185.47

Notes:

- (1) Energy Values are for Thermostats only.
- (2) Energy Price Arbitrage only applies to Battery Pathways.

System Reliability Procurement Investment Proposal for Electric Demand Response 2027-2029

Table 16

Rhode Island Energy

Summary of 2027 Load Reduction and Energy Savings by Program

	Load Reduction (kW)		Electric Energy Savings	
			MWh	
	Summer	Winter	Annual	Lifetime
Residential				
Residential ConnectedSolutions	27,375	0	214	214
Subtotal	27,375	0	214	214
Commercial & Industrial				
C&I ConnectedSolutions	33,228	0	0	0
Subtotal	33,228	0	0	0
Grand Total	60,603	0	214	214

System Reliability Procurement Investment Proposal for Electric Demand Response 2027-2029

Table 17

Rhode Island Energy

Summary of 2028 Load Reduction and Energy Savings by Program

	Load Reduction (kW)		Electric Energy Savings	
			MWh	
	Summer	Winter	Annual	Lifetime
Residential				
Residential ConnectedSolutions	32,480	0	230	230
Subtotal	32,480	0	230	230
Commercial & Industrial				
C&I ConnectedSolutions	39,399	0	0	0
Subtotal	39,399	0	0	0
Grand Total	71,879	0	230	230

System Reliability Procurement Investment Proposal for Electric Demand Response 2027-2029

Table 18

Rhode Island Energy

Summary of 2029 Load Reduction and Energy Savings by Program

	Load Reduction (kW)		Electric Energy Savings	
			MWh	
	Summer	Winter	Annual	Lifetime
Residential				
Residential ConnectedSolutions	37,536	0	249	249
Subtotal	37,536	0	249	249
Commercial & Industrial				
C&I ConnectedSolutions	42,291	0	0	0
Subtotal	42,291	0	0	0
Grand Total	79,827	0	249	249

System Reliability Procurement Investment Proposal for Electric Demand Response 2027-2029

Table 19
Rhode Island Energy
Summary of 2027 PIM Benefits

	Electric Energy			Capacity				RNS	Energy price arbitrage	Total
	Summer		Electric Energy DRIPE	Summer Generation	Capacity DRIPE	Transmission	Distribution			
	Peak	Off Peak								
Residential					435					
Residential ConnectedSolutions	\$12,934	\$0	\$285	\$978,906	\$2,435,122	\$585,825	\$2,720,438	\$1,256,511	\$129,241	\$8,119,263
Commercial & Industrial				\$25,048	\$62,310	\$711,076	\$3,302,075	\$1,525,156	\$72,993	\$5,698,658
C&I ConnectedSolutions	\$0	\$0	\$0	\$25,048	\$62,310	\$711,076	\$3,302,075	\$1,525,156	\$72,993	\$5,698,658
Total	\$12,934	\$0	\$285	\$1,003,954	\$2,497,432	\$1,296,901	\$6,022,513	\$2,781,667	\$202,233	\$13,817,921
Percent Application in PIM	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Notes:

- (1) Total PIM Benefits are based on avoided electric bill cost only.

System Reliability Procurement Investment Proposal for Electric Demand Response 2027-2029

Table 20
Rhode Island Energy
Summary of 2028 PIM Benefits

	Electric Energy			Capacity				RNS	Energy price arbitrage	
	Summer		Electric Energy DRIPE	Summer Generation	Capacity DRIPE	Transmission	Distribution			
	Peak	Off Peak								
Residential					\$2,713,144					
Residential ConnectedSolutions	\$14,566	\$0	\$303	\$1,270,269	\$2,713,144	\$711,005	\$3,301,744	\$1,615,890	\$183,537	\$9,810,458
Commercial & Industrial				\$32,118	\$68,601					
C&I ConnectedSolutions	\$0	\$0	\$0	\$32,118	\$68,601	\$862,455	\$4,005,042	\$1,960,087	\$131,262	\$7,059,566
Total	\$14,566	\$0	\$303	\$1,302,388	\$2,781,745	\$1,573,460	\$7,306,786	\$3,575,977	\$314,799	\$16,870,024
Percent Application in PIM	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Notes:

- (1) Total PIM Benefits are based on avoided electric bill cost only.

System Reliability Procurement Investment Proposal for Electric Demand Response 2027-2029

Table 21

Rhode Island Energy

Summary of 2029 PIM Benefits

	Electric Energy			Capacity				RNS	Energy price arbitrage	Total
	Summer		Electric Energy DRIPE	Summer Generation	Capacity DRIPE	Transmission	Distribution			
	Peak	Off Peak								
Residential				267			33,094			
Residential ConnectedSolutions	\$15,053	\$0	\$348	\$1,541,267	\$2,815,464	\$840,501	\$3,903,094	\$1,998,777	\$234,699	\$11,349,202
Commercial & Industrial					\$64,862					
C&I ConnectedSolutions	\$0	\$0	\$0	\$35,507	\$64,862	\$946,982	\$4,397,567	\$2,251,997	\$142,046	\$7,838,961
Total	\$15,053	\$0	\$348	\$1,576,775	\$2,880,326	\$1,787,483	\$8,300,661	\$4,250,773	\$376,745	\$19,188,163
Percent Application in PIM	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Notes:

- (1) Total PIM Benefits are based on avoided electric bill cost only.

System Reliability Procurement Investment Proposal for Electric Demand Response 2027-2029

Table 22

Rhode Island Energy

2027 Demand Response PIM (\$000)

	Performance Incentive				
	Eligible Benefits	Eligible Costs	Eligible Net Benefits	Design Payout Rate	Design Performance Payout
	100% Avoided Electric Bill Costs				
Residential	\$8,119	\$4,398	\$3,721		
Commercial & Industrial	\$5,699	\$4,750	\$949		
Total	\$13,818	\$9,148	\$4,670	10.0%	\$467

System Reliability Procurement Investment Proposal for Electric Demand Response 2027-2029

Table 23

Rhode Island Energy

2028 Demand Response PIM (\$000)

	Performance Incentive				
	Eligible Benefits	Eligible Costs	Eligible Net Benefits	Design Payout Rate	Design Performance Payout
	100% Avoided Electric Bill Costs				
Residential	\$9,810	\$5,063	\$4,748		
Commercial & Industrial	\$7,060	\$5,800	\$1,259		
Total	\$16,870	\$10,863	\$6,007	10.0%	\$601

System Reliability Procurement Investment Proposal for Electric Demand Response 2027-2029

Table 24

Rhode Island Energy

2029 Demand Response PIM (\$000)

	Performance Incentive				
	Eligible Benefits	Eligible Costs	Eligible Net Benefits	Design Payout Rate	Design Performance Payout
	100% Avoided Electric Bill Costs				
Residential	\$11,349	\$5,738	\$5,611		
Commercial & Industrial	\$7,839	\$6,111	\$1,728		
Total	\$19,188	\$11,849	\$7,339	18.0%	\$1,321

Appendix 2. Notes on Terminology

Least-Cost Procurement Standards

The version of the Least-Cost Procurement Standards in effect for 2027-2029 is the version adopted by **Order [TBD]** in Docket No. 26-15-EE: <https://ripuc.ri.gov/Docket-26-15-EE>.

The following definitions are excerpted from the Least-Cost Procurement Standards for convenient reference:

System Reliability Procurement

Procurement to meet or mitigate a gas or electric system need or to provide system optimization from a party other than the gas or electric utility⁵ that provides the need or optimization by employing diverse energy resources, distributed generation, or demand response.⁶

Utility Reliability Procurement

Procurement to meet or mitigate a gas or electric system need or to provide system optimization that is not System Reliability Procurement is a utility investment.⁷

System Needs

- i. Electric System Needs: Needs to serve both customer load and customer generation, including, but not limited to, system capacity (normal and emergency), voltage performance, reliability performance, protection coordination, fault current management, reactive power compensation, asset condition assessment, distributed generation performance, operational considerations, and customer requests.
- ii. Gas System Needs: Needs to serve customers, including, but not limited to, system capacity (normal and emergency), pressure management, asset condition assessment, gas service that supports electric distributed generation, and operational considerations.

⁵ A utility proposal to own and operate non-traditional investment or new operations and maintenance services, such as new voltage-regulation equipment, battery storage, or vegetation management, and any vendor services associated with such investment or service, shall not be considered System Reliability Procurement per this definition. Such investments and services are, however, still subject to the Guidance Document issued in Docket No. 4600A.

⁶ Including, but not limited to, the resources named in R.I. Gen. Laws § 39-1-27.7(a)(1)(i)-(iii).

⁷ For example, many such Utility Reliability Procurement investments and operations are proposed in annual Infrastructure, Safety, and Reliability Plans filed pursuant to R.I. Gen. Laws § 39-1-27.7.1(c)(2).

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Optimization of System Performance

Improvement of the performance and efficiency⁸ of the gas or electric system that includes enhanced reliability, peak load reduction, improved utilization of both utility and non-utility assets, optimization of operations, and reduced system losses.

Rhode Island Energy further annotates the following terminology to aid in understanding of this *SRP Investment Proposal*:

Non-Wires/Non-Pipes Alternative

Outdated terms referring to non-wires/non-pipes solution.

Non-Wires/Non-Pipes Solution

A solution that satisfies a System Need or Optimization of System Performance through means other than utility-owned infrastructure.

Non-Wires/Non-Pipes Opportunity

A System Need or Optimization of System Performance that may be satisfied via a Non-Wires/Non-Pipes Solution (i.e., the electric or gas screening criteria has been met).

Non-Wires/Non-Pipes Project Proposal

A proposal for a specific Non-Wires/Non-Pipes Solution for a specific Non-Wires/Non-Pipes Opportunity (i.e., such as a proposal submitted in response to a Request for Proposals).

Non-Wires/Non-Pipes Project

A specific Non-Wires/Non-Pipes Solution for a specific Non-Wires/Non-Pipes Opportunity (i.e., such as a project in the process of being constructed, installed, or otherwise implemented).

Non-Wires/Non-Pipes Program

The process by which Rhode Island Energy identifies non-wires/non-pipes opportunities, solicits and evaluates non-wires/non-pipes project proposals, and submits funding requests with relevant justification and documentation for non-wires/non-pipes projects.

Wires/Pipes Solution

A solution that satisfies a System Need or Optimization of System Performance through utility-owned infrastructure.

SRP Investment Proposal

A filing describing a Non-Wires/Non-Pipes Project per Chapter 5 of the Least-Cost Procurement Standards.

⁸ Efficiency includes both long- and short-term cost efficiency.

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Utility Performance Incentive

Shared value between customers and Company shareholders.

DRAFT

Appendix 3. Legal and Regulatory Basis

Least-Cost Procurement Statute⁹

System reliability procurement is contemplated in Rhode Island's Least-Cost Procurement statute. Some key relevant excerpts from this statute are below for convenient reference.

“§ 39-1-27.7. System reliability and least-cost procurement.

(a) Least-cost procurement shall comprise system reliability and energy efficiency and conservation procurement, as provided for in this section, and supply procurement, as provided for in § 39-1-27.8, as complementary but distinct activities that have as common purpose meeting electrical and natural gas energy needs in Rhode Island, in a manner that is optimally cost-effective, reliable, prudent, and environmentally responsible.

(b) The commission shall establish not later than June 1, 2008, standards for system reliability and energy efficiency and conservation procurement that shall include standards and guidelines for:

(1) System reliability procurement, including but not limited to:

- (i) Procurement of energy supply from diverse sources, including, but not limited to, renewable energy resources as defined in chapter 26 of this title;
- (ii) Distributed generation, including, but not limited to, renewable energy resources and thermally leading combined heat and power systems, that is reliable and is cost-effective, with measurable, net system benefits;
- (iii) Demand response, including, but not limited to, distributed generation, back-up generation, and on-demand usage reduction, that shall be designed to facilitate electric customer participation in regional demand response programs, including those administered by the independent service operator of New England (“ISO-NE”), and/or are designed to provide local system reliability benefits through load control or using on-site generating capability;
- (iv) To effectuate the purposes of this division, the commission may establish standards and/or rates (A) For qualifying distributed generation, demand response, and renewable energy resources; (B) For net metering; (C) For back-up power and/or standby rates that reasonably facilitate the development of distributed generation; and (D) For such other matters as the commission may find necessary or appropriate.

⁹ RIGL 39-1-27.7 <http://webserver.rilin.state.ri.us/Statutes/TITLE39/39-1/39-1-27.7.HTM>

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(4) Each electrical and natural gas distribution company shall submit to the commission on or before September 1, 2008, and triennially on or before September 1 thereafter through September 1, 2028, a plan for system reliability and energy efficiency and conservation procurement...”

Least-Cost Procurement Standards – Chapter 5

Chapter 5 of the Rhode Island Public Utilities Commission’s “Least-Cost Procurement Standards,” approved and adopted pursuant to **Order No. [TBD]** in Docket No. 26-15-EE (LCP Standards), describes the intent, purpose, content, orders, and timing of *SRP Investment Proposals*. This Chapter is copied below for convenient reference.

“5.1 Intent

- A. This Chapter provides standards and guidelines for System Reliability Procurement investment proposals (SRP Proposals) that are consistent with Three-Year SRP Plans filed pursuant to Chapter 4.
- B. This Chapter does not require that all System Reliability Procurement investments identified in a Three-Year SRP Plan must be funded through an SRP Proposal.¹⁰

5.2 Purpose

- A. SRP Proposals will present specific implementation of a System Reliability Procurement investment.
- B. SRP Proposals will present specific costs of investments, specific funding plans, and, if applicable, proposals for cost recovery.
- C. SRP Proposals will identify any established incentives that the specific investment is eligible for.

5.3 Content

A. Testimony

- i. The distribution company will prefile testimony on the following:
 - a. how the Plan is consistent with the requirements of Section 1.3;
 - b. updated and specific information required in Sections 4.4.A.ii.a through d, 4.4.A.iv, and 4.4.A.v relevant to the investment(s);
 - c. costs, a funding plan, and proposed cost recovery; and

¹⁰ For example, in some instances, the investment may appropriately be funded through an Annual EE Plan.

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d. the specific approvals the distribution company is requesting from the PUC.

5.4 Orders

- A. The PUC will approve SRP Proposals that meet these Standards.
- B. The PUC may deny approval of investment proposals that do not meet these Standards and that are not critically lined to the cost-effectiveness of other investments that are otherwise consistent with these Standards.
- C. The PUC will order adoption of any other proposals supported by the SRP Proposal and consistent with Least-Cost Procurement, and all applicable statutes, rules, and policies.

5.5 Timing

- A. The PUC does not limit the timing of SRP Proposals, but prefers that the proposals be filed alongside, but separately from, annual Infrastructure, Safety, and Reliability Plans.”

Least-Cost Procurement Standards – Section 1.3

Section 1.3 of the Rhode Island Public Utilities Commission’s “Least-Cost Procurement Standards,” approved and adopted pursuant to **Order No. [TBD]** in Docket No. 26-15-EE (LCP Standards), establishes principles and stipulations for the assessment of cost, cost-effectiveness, reliability, prudence, and environmental responsibility of system reliability procurement solutions. This Chapter is copied below for convenient reference.

“A. Least-Cost Procurement shall be cost-effective, reliable, prudent, and environmentally responsible. Least-Cost Procurement that is Energy Efficiency and Conservation Procurement shall also be lower than the cost of additional energy supply. System Reliability Procurement shall be lower than the cost of the best alternative Utility Reliability Procurement.

B. When preparing any cost test or resource assessment, including the RI Test, the following principles will be applied:

- i. Supply-side and demand-side alternative energy resources shall be compared in a consistent and comprehensive manner.
- ii. Cost tests shall be created using the RI Framework and account for applicable policy goals, as articulated in legislation, PUC orders, regulations, guidelines, and other policy directives.

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iii. Cost tests shall account for all relevant, important impacts, even those that are difficult to quantify and monetize. Where applicable cost or benefit categories cannot be quantified, such categories shall be qualitatively assessed.¹¹

iv. Cost tests shall be symmetrical, for example, by including both costs and benefits for each relevant type of impact.

v. Analyses of the impacts of investments shall be forward-looking, capturing the difference between costs and benefits that would occur over the life of the investments with those that would occur absent the investments. Sunk costs and benefits are not relevant to a cost-effectiveness analysis.

vi. Cost tests shall be completely transparent and should fully document and reveal all relevant inputs, assumptions, methodologies, and results.

C. Cost-Effective

i. The PUC shall determine cost-effectiveness in a manner consistent with the PUC's Guidance Document issued in Docket No. 4600A.

ii. The distribution company shall assess the cost-effectiveness of measures, programs, and portfolios of Least-Cost Procurement. All categories of the RI Test are applicable to cost-effectiveness, although some categories may have no or unknown value. The distribution company shall assess cost-effectiveness using, at a minimum, the following two cost-effectiveness analyses:

a. An analysis that, for categories with value or cost that is shared between Rhode Island Energy and other jurisdictions (both within the state and region), presents benefits and costs without allocating them between Rhode Island Energy and other jurisdictions;

b. An analysis that, for categories with value or cost that is shared between Rhode Island Energy and other jurisdictions (both within the state and region), presents only those benefits and costs that will be allocated to Rhode Island Energy.

iii. The distribution company shall provide the specific benefit- and cost-factors included in determining the RI Test ratios.

iv. With respect to the value of greenhouse gas reductions, the RI Test shall include the costs of greenhouse gas emissions mitigation (measured in CO₂ equivalents) as they are imposed and are projected to be imposed by the Regional Greenhouse Gas Initiative, Rhode Island Renewable Energy Standard and Rhode Island Act on Climate, and any other utility system costs associated with

¹¹ Qualitative assessments may include relative descriptions of magnitude and direction.

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reasonably anticipated future greenhouse gas reduction requirements at the state, regional, or federal level for both electric and gas programs. The RI Test shall also include the costs and benefits of other emissions and their generation or reduction through Least Cost Procurement. The RI Test may include the value of greenhouse gas reduction not embedded in any of the above.

v. Benefits and costs that are projected to occur over the term of the Least-Cost Procurement investment shall be stated in present value terms in the RI Test calculation, using a discount rate that appropriately reflects the risks of the investment of customer funds in Least-Cost Procurement. Energy efficiency is typically regarded as a low-risk resource in terms of cost of capital risk, project risk, and portfolio risk.

vi. Economic development benefits that can be shown to be incremental to the cost and benefits included in other categories shall be included in the RI Test. Gross economic development benefits, or benefits that are not reliably shown to be incremental to costs and benefits included in other categories, should be reported separately from the RI Test tabulation along with employment impact data.

D. Reliable

- i. The distribution company shall assess the
 - a. ability of Least-Cost Procurement investments to meet the energy supply or delivery system needs.
 - b. ability of previous investments, including identical or similar investments, to support the conclusion that a new investment is reliable, and
 - c. potential for implementation issues, including available workforce, market continuity, program scalability.
- ii. As applicable, the distribution company also shall assess an investment's
 - a. ability to meet specific identified system needs;
 - b. anticipated reliability as compared to alternatives;
 - c. operational complexity and flexibility;
 - d. resiliency of the system;
 - e. risks associated with investment (for example, the ability to obtain licensing and permitting, significant risks of stranded investment, the potential risk reduction of a more incremental approach, sensitivity of

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alternatives to differences in load forecasts, and emergence of new technologies, etc.);

f. risks associated with customers' behavior, responsiveness, and ability to potentially modify usage at certain times and seasons; and

g. relative changes in other risks that are applicable to the investment, such as reduced (or increased) public safety risk.

The distribution company shall supply any other information that the company believes supports a finding that an investment is reliable.

E. Prudent

i. The distribution company shall assess:

a. how the investment supports the goals of the electric or natural gas system and the purposes of Least-Cost Procurement.

b. potential for synergy savings based on alternatives that address multiple needs;

c. how the entire investment proposal affects the risks of ratepayers and the distribution company;

d. how the investment effectively uses available funding sources and integrates with energy programs and policies; and

e. how the investment is equitable in consideration of the allocation of costs, the allocation of benefits, customer access, and customer participation. This shall be done by, at minimum, assessing which groups have historically received disproportionately lower benefits from LCP investments and by presenting other appropriate, quantifiable metrics that describe how an investment is equitable.

ii. The distribution company shall provide rate impacts to a range of customer types and usage levels, and shall provide bill impacts, and shall provide how these impacts were considered in the proposed investment.

iii. The distribution company may provide additional cost tests to support a finding that an investment is prudent.

iv. The distribution company shall supply any other information that the company believes supports a finding that an investment is prudent.

F. Environmentally Responsible

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- i. The distribution company shall assess how investment complies with State environmental and climate policies and shall properly value environmental and climate costs and benefits.
- ii. The distribution company shall assess how the investment affects environmental and climate pollution, where applicable, at a local, regional, and global scale.

G. Lower than the Cost of Additional Supply (omitted)

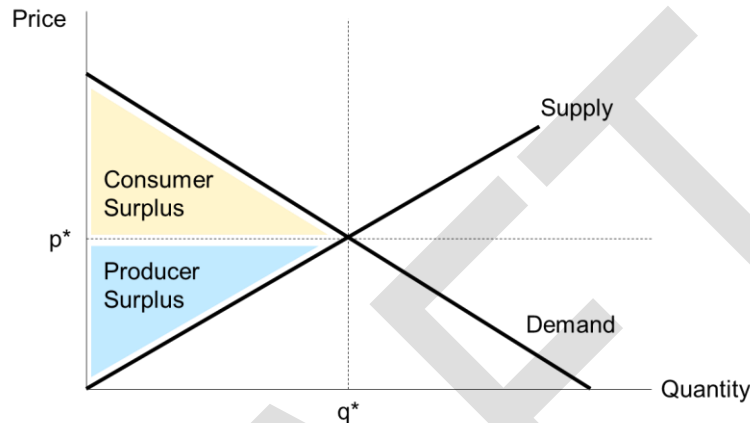
H. Lower than the cost of the best alternative Utility Reliability Procurement

- i. The distribution company shall compare the cost of System Reliability Procurement measures, programs, and/or portfolios to the cost of the best alternative Utility Reliability Procurement option using all applicable costs enumerated in the RI Framework. The distribution company shall provide specific costs included in the Cost of System Reliability Procurement.
- ii. At a minimum, the comparison shall include the applicable cost categories in a Total Resources Cost Test. For categories with value or cost that is shared between Rhode Island Energy and other jurisdictions (both within the state and region), presents only those benefits and costs that will be allocated to Rhode Island Energy customers. The analysis will also exclude costs savings related to external energy market fuels (e.g., delivered fuels).
- iii. The distribution company shall describe which costs in the RI Framework were included in the cost of System Reliability Procurement and which costs are included in the alternative Utility Reliability Procurement. For any categories that are not included in either, the distribution company shall describe why these categories are not included.”

Appendix 4. Technical Appendix

Conceptual approach

Program design can be modeled conceptually as a set of economic supply and demand curves across pathways. Let's first start with a single pathway. The simple economic model, depicted below, plots price against quantity:



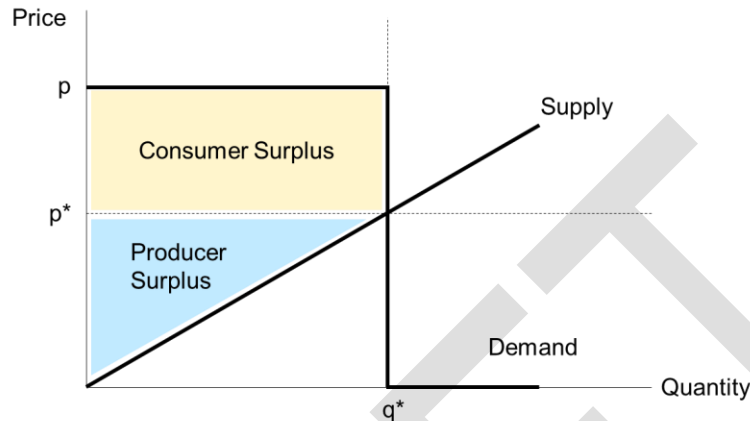
The demand curve (in this simple depiction, a line) slopes from the top left corner of the graph, representing a small number of units of quantity demanded when the good or service is offered at a high price, to the bottom right corner of the graph, representing a large number of units demanded when the good or service is offered at a low price. The supply curve (also a line in this simple depiction) slopes from the bottom left corner of the graph, representing that a small number of units will be supplied when the price is low, to the top right corner of the graph, representing a large number of units supplied when the price is high. The supply and demand curves intersect at quantity demanded, q^* , and price, p^* . At equilibrium, producers will sell q^* units of a good or service at price p^* ; consumers will buy those q^* units of that good or service at price p^* . The area represented in yellow, called consumer surplus, represents the value consumers receive as defined by the difference between the maximum price the consumer would be willing to pay and the price actually paid, for all q^* units. The area represented in blue, called producer surplus, represents the value producers receive as defined by the difference between the minimum price the producer would be willing to accept and the price actually accepted for all q^* units. Together, consumer surplus plus producer surplus represents the value gained by everyone in the market.¹²

For the purposes of program design, Rhode Island Energy is the sole consumer in the market. The service being purchased is peak demand reduction at some price p (measured in dollars per kW) and in some quantity q (measured in kilowatts, kW). The producers are the program

¹² This simplified explanation omits discussion of market failures like externalities; there may be non-monetary value that accrues to consumers, producers, or entities who are not part of the market that is not reflected here. Further discussion on this topic below.

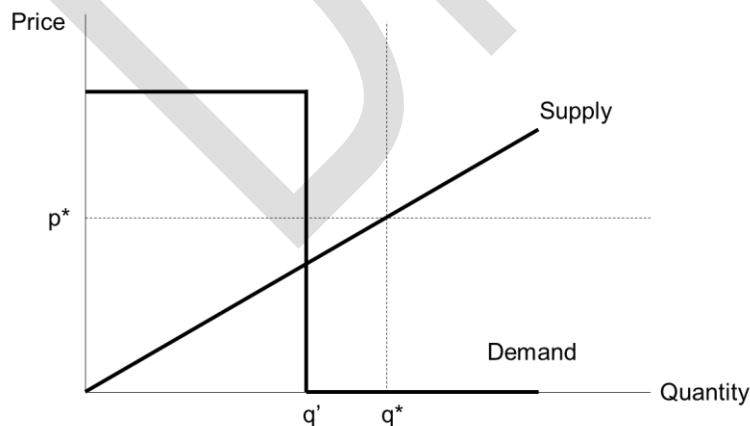
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participants that reduce peak demand in exchange for an incentive payment (whether structured as an upfront enrollment incentive, a pay-for-performance incentive, a financing incentive, etc.). We can draw a more specific supply and demand graph for a specific pathway in the program:



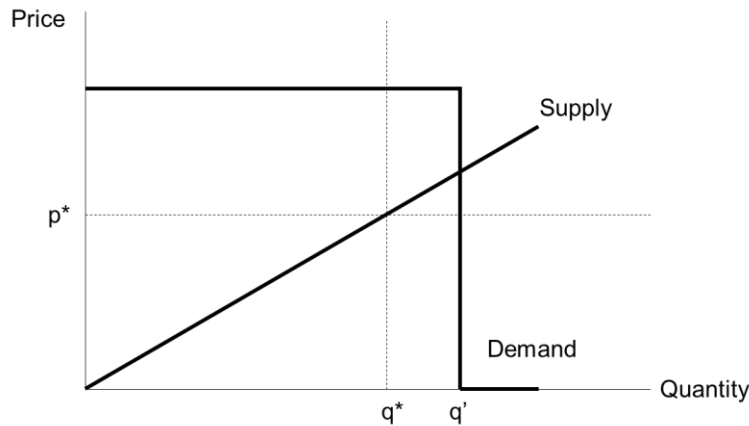
The demand curve represents Rhode Island Energy's maximum willingness to pay for peak demand reduction through this pathway. For up to q^* units, Rhode Island Energy is willing to pay price p . After q^* units are procured, Rhode Island Energy's willingness to pay drops to zero. The supply curve is depicted as a simple upward-sloping line, but in reality may be a more complex curve based on the actual economics and decision-making of program participants. Consumer and producer surplus are shown in yellow and blue, respectively.

As the sole consumer and the program designer, Rhode Island Energy is charged with determining an appropriate quantity q^* to procure and an appropriate price p^* to pay. In the above graph, the quantity q^* may represent a constraint, such as only having enough budget to buy q^* units. The following four graphs show some of the factors that contribute to setting p^* and q^* (the incentive level and the quantity to be procured), and the resulting outcomes of imperfect program design.

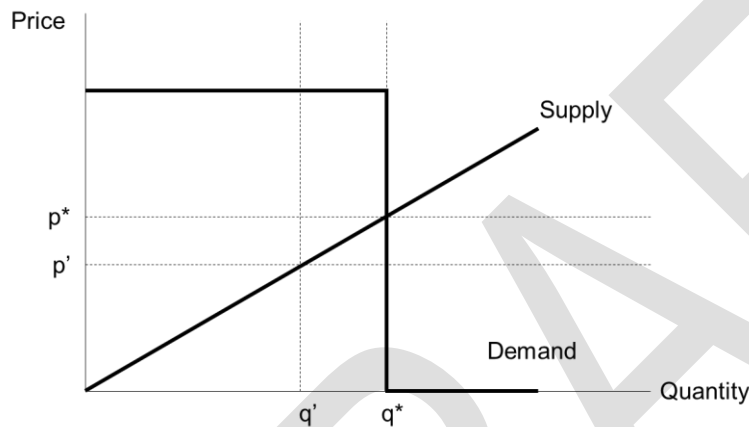


If we size the pathway too small ($q' < q^*$), then we risk not getting as much low-cost peak demand reduction as we could. Resulting effects may include the pathway being oversubscribed, spending more than budgeted, collecting less funding than needed, and turning away potential participants.

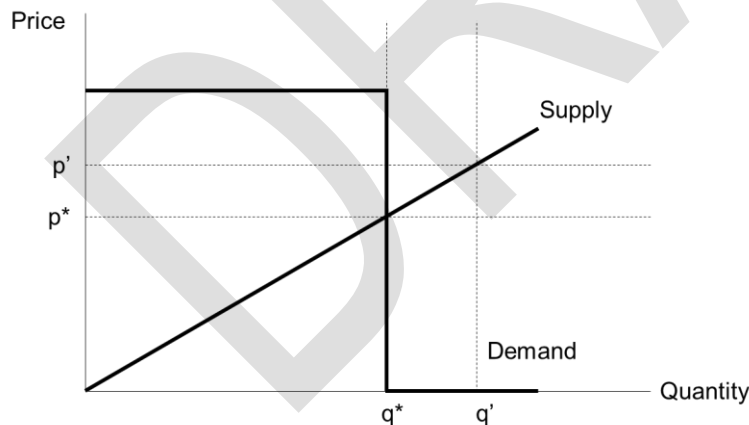
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If we size the pathway too big ($q' > q^*$), then there is the risk that the incentive is too low to fully subscribe q' . The result may be undersubscription, collecting from customers than ultimately spent more, and delivering lower value than planned.



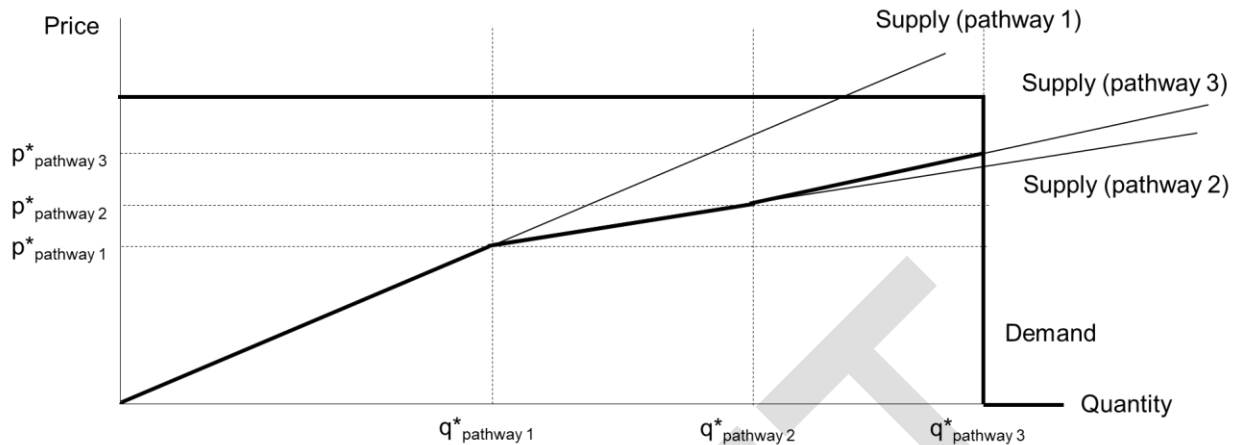
If we set the incentive rate too low ($p' < p^*$), then the incentive won't be sufficient to encourage the level of participation and peak demand expected. The result may be that the pathway is undersubscribed ($q' < q^*$), resulting in overcollections from customers and lower value than planned.



If we set the incentive rate too high ($p' > p^*$), then we risk having the pathway be oversubscribed, which means under-collecting program funding from customers and potentially turning would-be participants away.

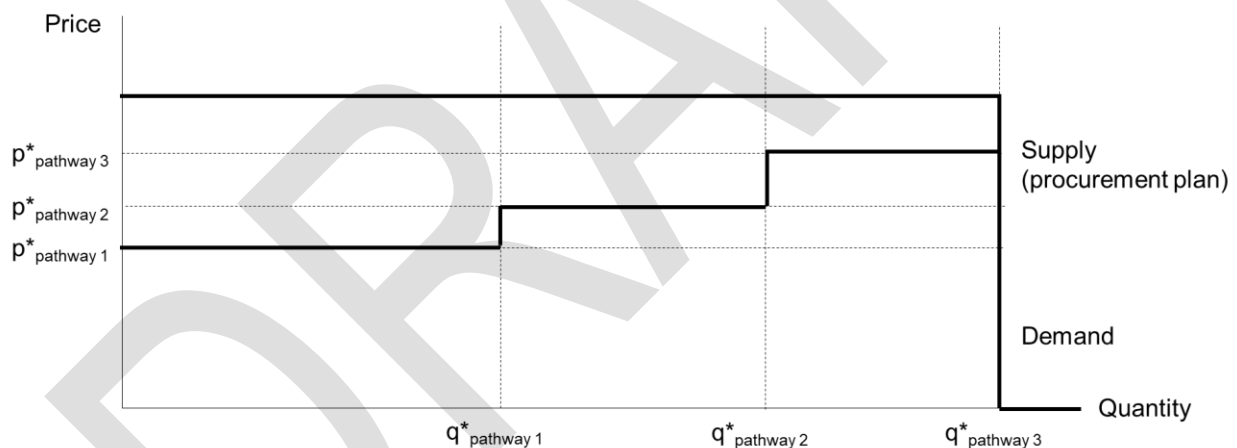
The program is an aggregation of pathways. To model the program, we order the pathways from lowest price p^* to highest price p^* and concatenate the supply and demand curves associated with the quantity q^* proposed to be procured through each pathway. The figure below models supply and demand curves for a program consisting of three pathways.

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Within each pathway, the model assigns the same willingness to pay for every unit of peak demand reduction, reflecting the program's technology-agnostic design. For simplicity, the charts show a single willingness to pay value across all pathways.

Similarly, we can depict our proposed procurement plan based on the incentive p^* available for q^* units to be procured through each pathway:

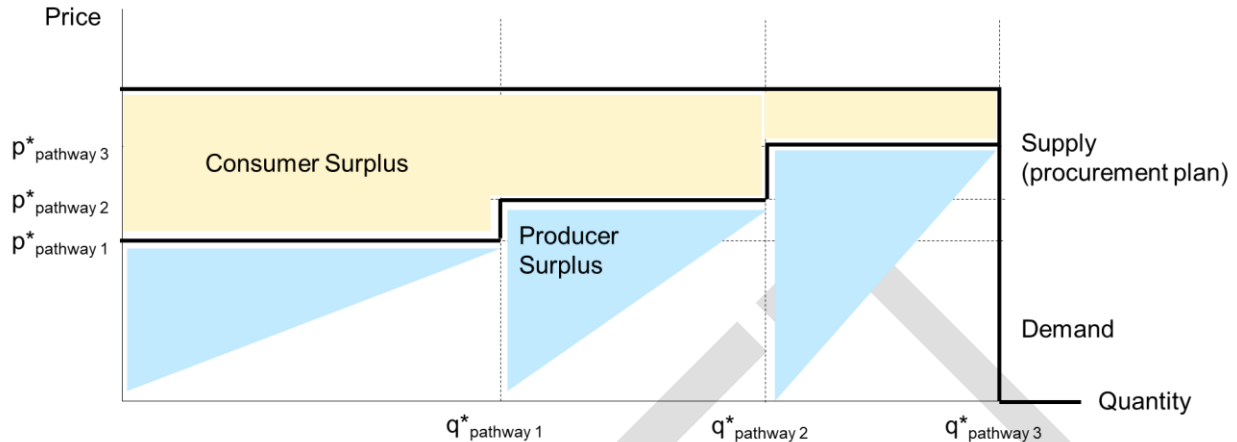


In this model, consumer surplus is depicted by the yellow area, representing the value gained by paying a price p^* that is less than our maximum willingness to pay.¹³ Producer surplus is

¹³ Although we model Rhode Island Energy as the sole consumer in this market, the value of the consumer surplus actually flows to Rhode Island Energy customers (in the form of lower electric bills; see discussion on setting willingness to pay). Rhode Island Energy proposes to share a portion of this value with its shareholders (in the form of a performance incentive; see discussion in associated pre-filed testimony).

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depicted by the blue area, representing the value gained by program participants for reducing peak demand.¹⁴



As program designer, Rhode Island Energy seeks to maximize consumer surplus subject to applicable constraints, such as budget constraints, statutory and regulatory constraints, and market constraints.^{15, 16} The budget constraint is derived from how much is feasible and prudent to collect from customers to fund this program given the whole of existing rates and anticipated bill impacts. Statutory and regulatory constraints are derived from compliance with applicable statutes and regulations (i.e., Least-Cost Procurement). Market constraints capture the availability of quantity able to be produced and may be affected by the availability of enabling technologies (e.g., Bring Your Own Thermostats) and workforce.

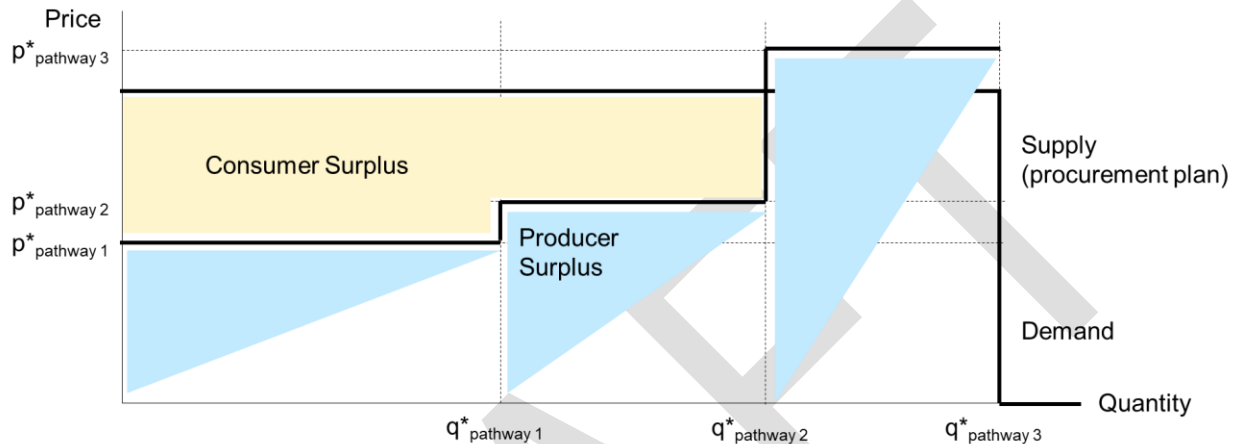
¹⁴ Note that producer surplus may be wholly gained by participants (e.g., a participant gets 100 percent of the incentive for setting their thermostat back for peak events) or shared between participants and third parties (e.g., a participant enters into a contract with a vendor in which the vendor receives a portion of the participant's incentive payout in exchange for the vendor's support in reducing the participant's peak demand). Regarding the latter, Rhode Island Energy is not party to such agreements and therefore makes no assumptions about the structure or sharing of the producer surplus in such instances. 100 percent of value not captured by utility bills is retained by society (e.g., customers and non-customers, with the exact mix dependent on the value category).

¹⁵ Rhode Island Energy focuses on maximizing consumer surplus because of its company mission (and statutory franchise obligation) to deliver affordable electric service to all customers. Producer surplus accrues only to the subset of participating customers and their vendors. In theory, a program designer with a societal perspective could conduct a dual maximization across consumer and producer surplus; such an exercise would be complex and would require a level of market data and insight that is not available at this time. Although Rhode Island Energy takes a predominantly utility perspective, we acknowledge the incremental value of the various pathways. (Indeed, if Rhode Island Energy were to take a strict utility perspective, we would procure as much of the least expensive peak demand reduction as possible and zero demand reduction that is more costly than willingness to pay. Given an indifference curve mapped between quantity of peak demand reduction via less costly thermostats and more costly batteries, with a budget constraint, a purely utility perspective planner would put the entirety of their budget toward peak reduction from thermostats.)

¹⁶ Academically, this is modeled as utility (i.e., value) maximization subject to constraint, which optimizes quantities procured across pathways rather than in isolation for each pathway.

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It is insightful to also model the case in which the cost of procuring peak demand through a pathway exceeds willingness to pay, illustrated below. In this case, the producer surplus grows and the consumer surplus shrinks. Such a procurement plan may be justified in a number of instances, such as if there are anticipated returns on investment (e.g., lower cost peak demand reduction available in future procurements), non-modeled value that is external to the transaction (e.g., the value of local jobs and macroeconomic activity), or other bases.



The following sections of this technical appendix dig into the above conceptual framework as applied to proposed program design for 2027-2029. First, we discuss our determination of willingness to pay. Then, we estimate and adjust the price available p^* for peak demand reduction in each pathway. Finally, we set target quantity q^* to procure from each pathway.

Willingness to pay

Rhode Island Energy's willingness to pay for a unit of peak demand reduction is equivalent to the cost our customers would otherwise pay for us to serve that unit of demand during peak. These values are specifically limited to costs that would materialize on customer electric bills: energy costs and associated intrastate demand reduction induced price effects (DRIPE), energy price arbitrage, intrastate capacity costs and associated intrastate DRIPE, Regional Network Service (RNS) charges, local transmission infrastructure cost, and distribution infrastructure costs.

The table below shows the value stack for each year of the planning period.¹⁷ Avoided energy and capacity costs and associated intrastate DRIPE are derived from the 2024 Avoided Energy Supply Cost (AESC) Study, adjusted for inflation using an inflation rate of 2.29 percent. We use intrastate DRIPE to reflect the limitation of our perspective to Rhode Island customers. Energy price arbitrage was estimated using ISO-NE wholesale energy price data for 2023-2025, assuming 85 percent round-trip battery efficiency and comparing the difference in average price

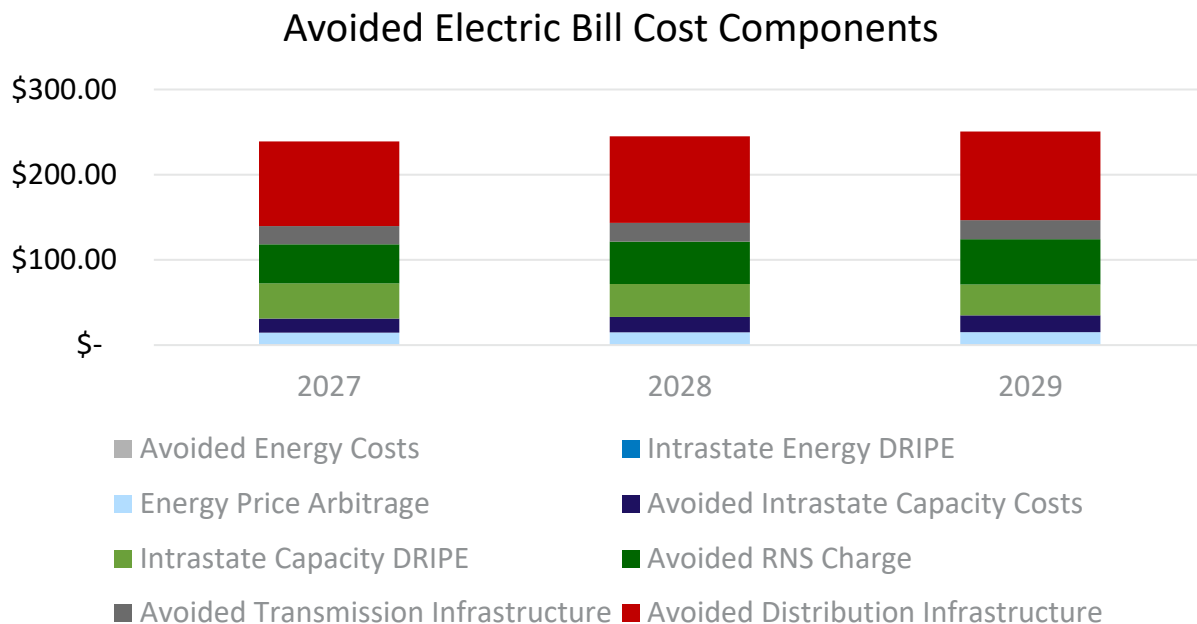
¹⁷ Please note that although cents and decimals are included in figures, this level of detail is not intended to imply precision to the hundredths place.

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between the highest price 90 hours and the rest of the summer hours. Avoided RNS charges are prorated for three months based on ISO-NE values. Avoided distribution and transmission infrastructure costs were obtained by the methodology recommended by the 2024 AESC Study. Values were scaled by inflation to determine values for 2028 and 2029.

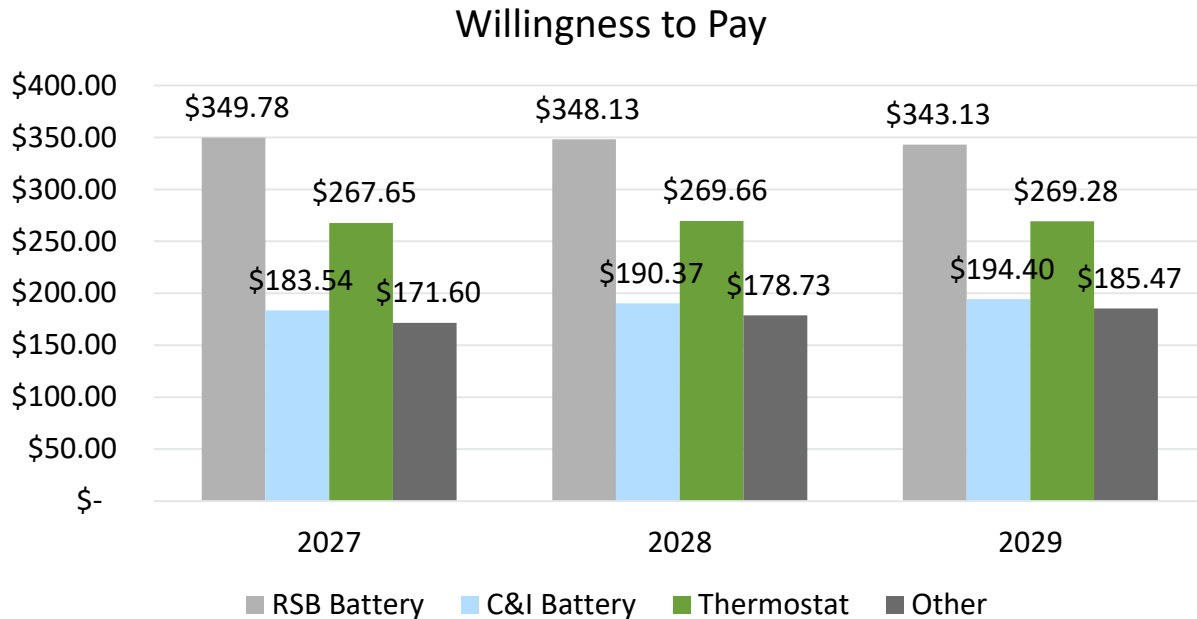
Value Category	2027	2028	2029
Avoided Energy Costs	\$0.73/kW	\$0.77/kW	\$0.73/kW
Intrastate Energy DRIPE	\$0.02/kW	\$0.02/kW	\$0.02/kW
Energy Price Arbitrage	\$13.87/kW	\$14.18/kW	\$14.51/kW
Avoided Intrastate Capacity Costs	\$16.57/kW	\$18.12/kW	\$19.75/kW
Intrastate Capacity DRIPE	\$41.21/kW	\$38.70/kW	\$36.08/kW
Avoided RNS Charge	\$45.90/kW	\$49.75/kW	\$53.25/kW
Avoided Transmission Infrastructure	\$21.40/kW	\$21.89/kW	\$22.39/kW
Avoided Distribution Infrastructure	\$99.38/kW	\$101.65/kW	\$103.98/kW
Totals			
RSB Battery	\$349.78/kW	\$348.13/kW	\$343.13/kW
C&I Battery	\$183.54/kW	\$190.37/kW	\$194.40/kW
Thermostat	\$267.65/kW	\$269.66/kW	\$269.28/kW
Other	\$171.60/kW	\$178.73/kW	\$185.47/kW

The above table is illustrated in the figure below:



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The avoided electric bill costs are different for batteries relative to other measures. Batteries include energy price arbitrage in their value stack but not avoided energy costs or energy DRIPE. Values for RSB batteries and C&I batteries differ due to their level of participation in capacity market (cleared vs. uncleared capacity). The figure below shows the value stack for RSB batteries, C&I batteries, thermostats, and non-batteries in 2027-2029:



For program design purposes, Rhode Island Energy used the relevant value for year and technology.

Incentive levels

The team estimated unit cost (\$/kW) for a unit of peak demand reduction in each pathway in each year. More specifically, unit costs are determined for each incentive level in each pathway (since, in some pathways, participants may receive different incentive levels). There are four components of unit cost: incentive cost, financing cost, administration cost, and regulatory allocation.

The incentive cost is determined by normalizing the incentive level (\$) by the expected peak demand reduction (kW). Expected peak demand reduction is based on actual performance of prior year devices: a thermostat reduces 0.64 kW, a battery reduces 5.80 kW, and a participating electric vehicle or charger reduces 0.32 kW. Incentive levels for RSB batteries and C&I track pathways are set by kW so do not need to be normalized.

The financing cost is determined by normalizing the cost of the HEAT loan (\$) across the expected peak reduction in the RSB pathway (kW). The HEAT loan is only available to participants in the RSB pathway, so its costs are not normalized by the peak reduction expected

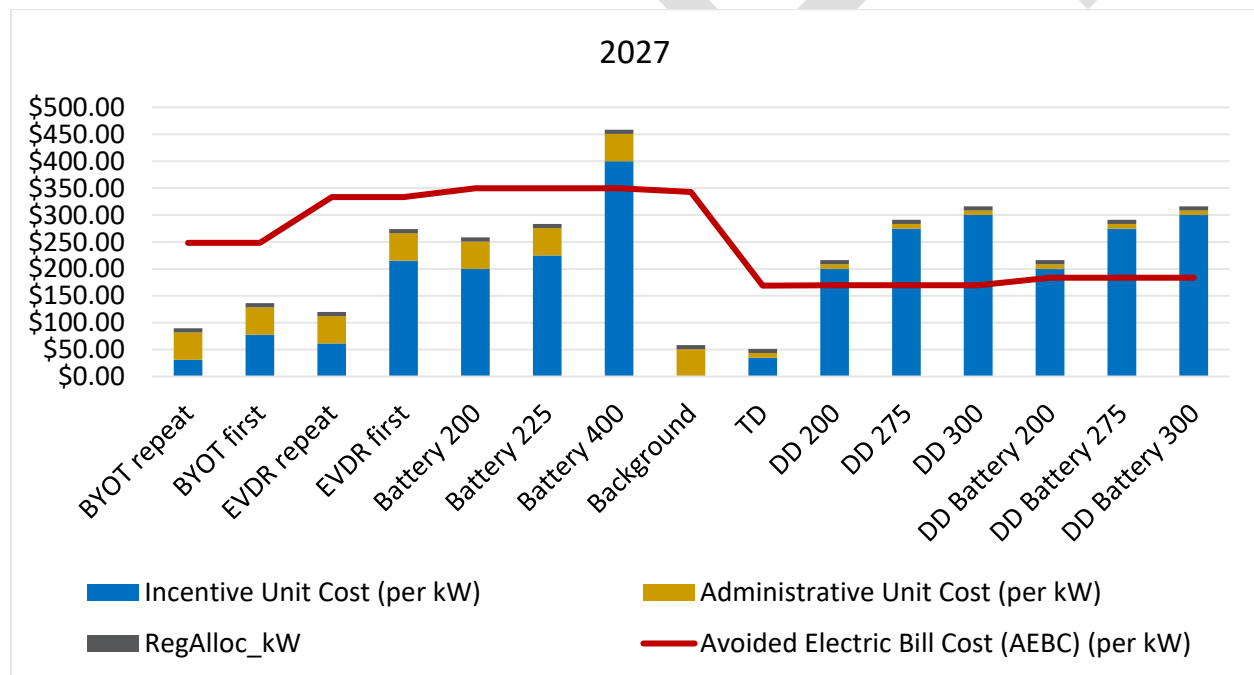
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from other pathways. The cost of the HEAT loan is considered to be contained within the first year of an eligible participant's participation and sunk in future years of participation. The cost of the HEAT loan includes the cost of the interest buy-down, a monthly administrative fee, and a charge per loan.

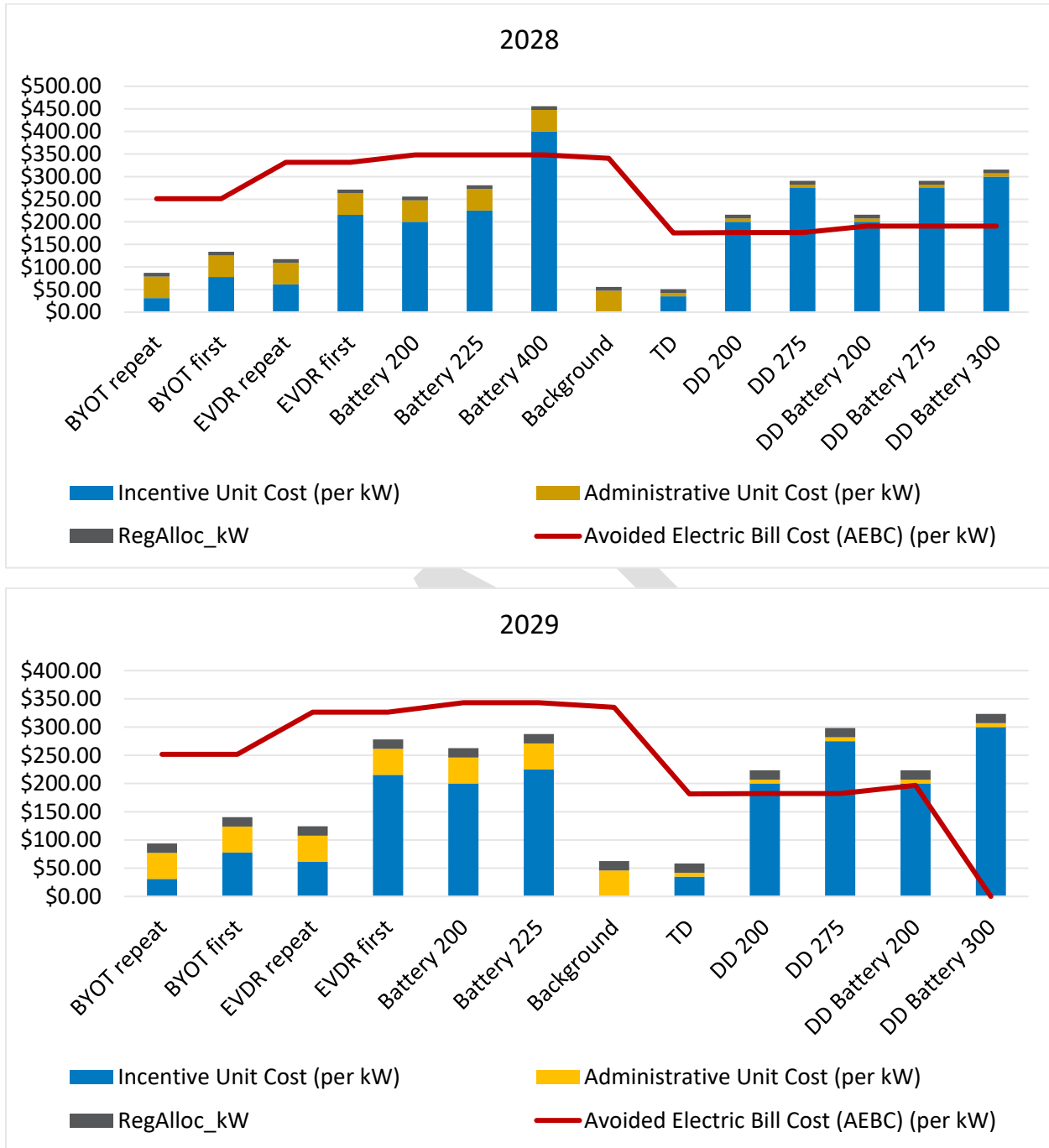
The administration cost is determined by normalizing all non-incentive, non-financing costs (\$) across the expected peak demand reduction (kW) in each track. Administration costs are normalized by track instead of by pathway because administration is sufficiently separable by track but not by pathway.

Together, the incentive cost, financing cost, and administration cost equal the program cost. The regulatory allocation is three percent of the program cost, applied to each pathway.

The figures below show the unit cost of reducing peak demand by 1 kw for each pathway (bars) compared to the avoided electric bill cost (AEBC, the red line). Financing cost is omitted from these figures; financing cost is around \$7/kW.



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The value created in terms of avoided electric bill costs is calculated by subtracting the unit cost (P) of procuring a unit (kW) of peak demand reduction from the relevant estimate of avoided electric bill cost (AEBC), with the difference multiplied by the number of units (Q) proposed to be procured through that pathway. Value to be shared is the sum across all pathways.

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$$Value = \sum_{pathway} ((AEBC - P_{pathway}) * Q_{pathway})$$

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