October 21, 2026
PEDR FAWG

Load Management in Massachusetts

EVERSOURCE

nationalgrid

Unitil
energy for life

Agenda

Definitions

Existing Programs

Emerging Areas

Foundational Capabilities

Contact Us

Defining "Peak"

Electric system constraints vary by:

- Season
- Level of the system
  - Generation
  - Transmission
  - Distribution
- Import-constrained (load) vs export-constrained (generation)

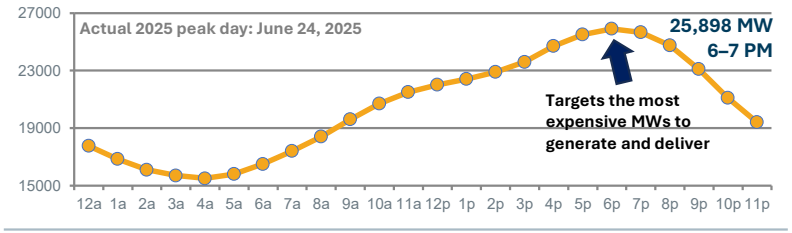
The constraints and needs at each level of the system may or may not align.

One portfolio of flexibility, dispatched for different grid needs

System peaks are regional and coincident. Distribution constraints are local, time-specific and tied to network capacity.

SYSTEM LEVEL

Manage the ISO-NE coincident system peak

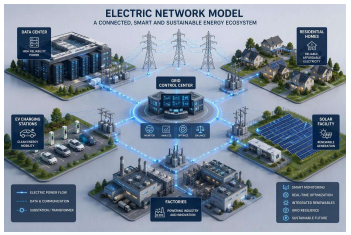


Example: ConnectedSolutions

Dispatching thermostats, batteries, EVs and C&I load reductions to target the most expensive MWs to deliver across the system.

DISTRIBUTION LEVEL

Resolve a specific feeder or substation constraint



RIGHT PLACE + TIME

Only resources connected to the constrained location can solve the need.

Example: ConnectedSolutions+

Targeted distributed resources to reduce, defer, or remove the need for a traditional wires investment.

TWO NWA USE CASES

Asset deferral / avoided infrastructure

Leveraging flexibility to reduce the local peak to postpone or avoid wires solution

Bridge-to-wires

Leveraging flexibility to maintain reliability until the wires solution is in service

Dispatch design follows the need: regional peak reduction, or precise local relief.

Types of Demand Management

- Permanent load reductions – energy efficiency
  - Improvement of building envelopes,
- Demand response – temporary reductions in load in response to a signal from the utility
  - Can be load shed, but often utilizes load shifting
- Load profile optimization – semi-permanent changes to a customer's load profile
  - Building controls that utilize pre-cooling strategies, e.g.

Today, there are a number of mature and emerging offerings for customers to participate in peak management

Mature

- Energy Efficiency
- Connected Solutions
- Managed Charging

Emerging

- Vehicle to Grid
- Flexible Interconnection
- Local Grid Services
- New Participation Models

All of these offerings are underpinned by foundational investments that the Massachusetts EDCs have been making over the past decade.

We continue to invest in the capabilities that will help us manage the future grid, and provide a positive customer experience.

Current Programs

Today's Load Management Programs



"Passive" Demand Reduction

Permanent load reductions through energy efficiency investments



Active Demand Reduction "ConnectedSolutions"

Temporary load reductions in response to a signal from the utility during specified times



EV Managed Charging

Establishing charging schedules that avoid charging load during peak times

Energy Efficiency – Mass Save

The Mass Save programs offer a robust suite of energy efficiency, decarbonization, and demand management programs to customers.

In 2025, the programs incentivized the installation of:

- 25K residential heat pumps
- 54K residential weatherization jobs
- Over 3K custom C&I projects

Connected Solutions

Since 2016, Massachusetts has operated a robust Virtual Power Plant (VPP) program. Over time, the program has grown to include CT, NH, RI, and ME all operating under the same brand – “ConnectedSolutions”.

- In MA, this program is funded as part of the 3-Year Mass Save Plans.
  - Program plans are developed in concert with the Energy Efficiency Advisory Council.

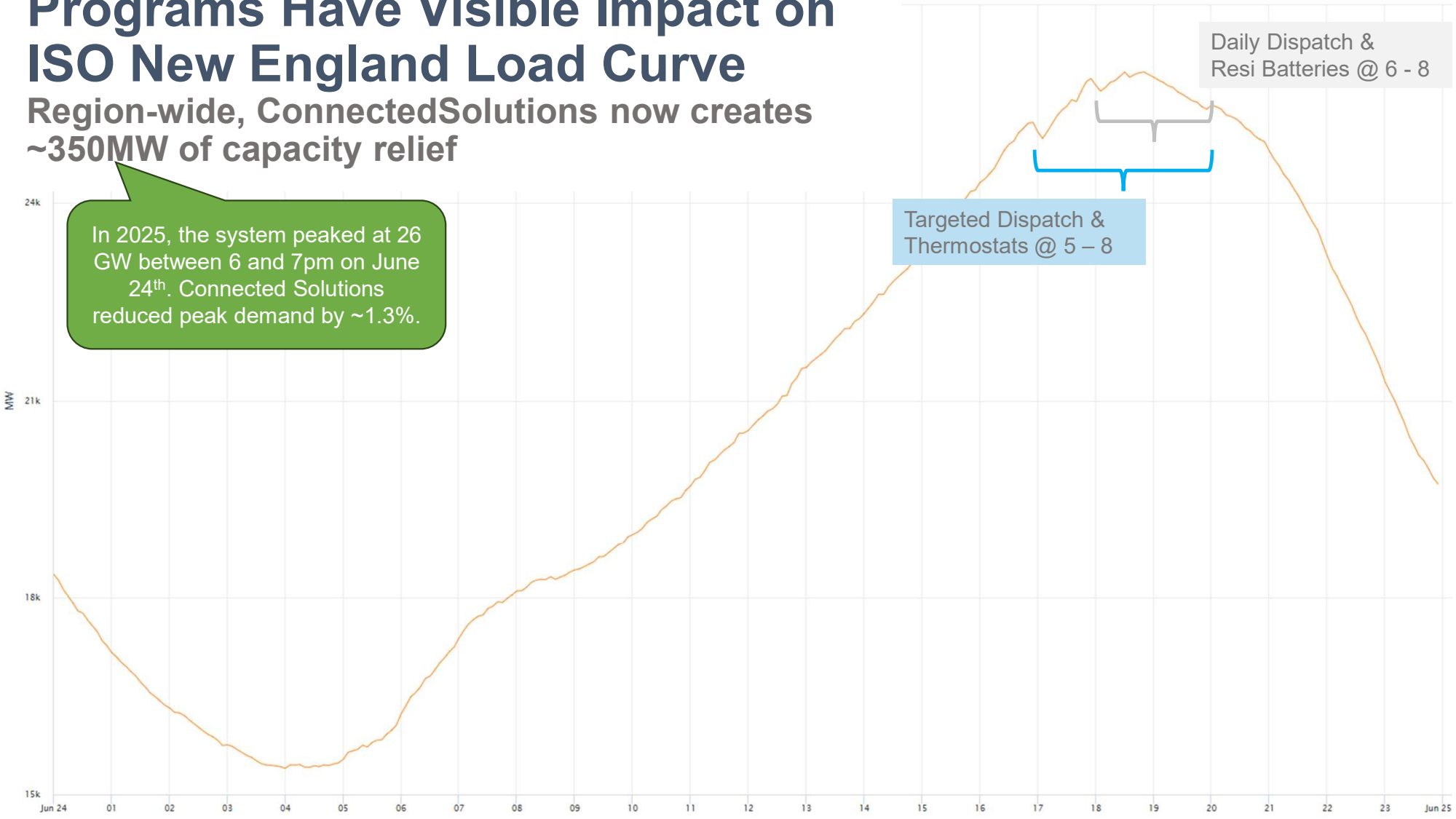
Targets the ISO-NE system peak (generation and transmission)

Operated in concert with a robust network of third-party vendor partners

Programs Have Visible Impact on ISO New England Load Curve

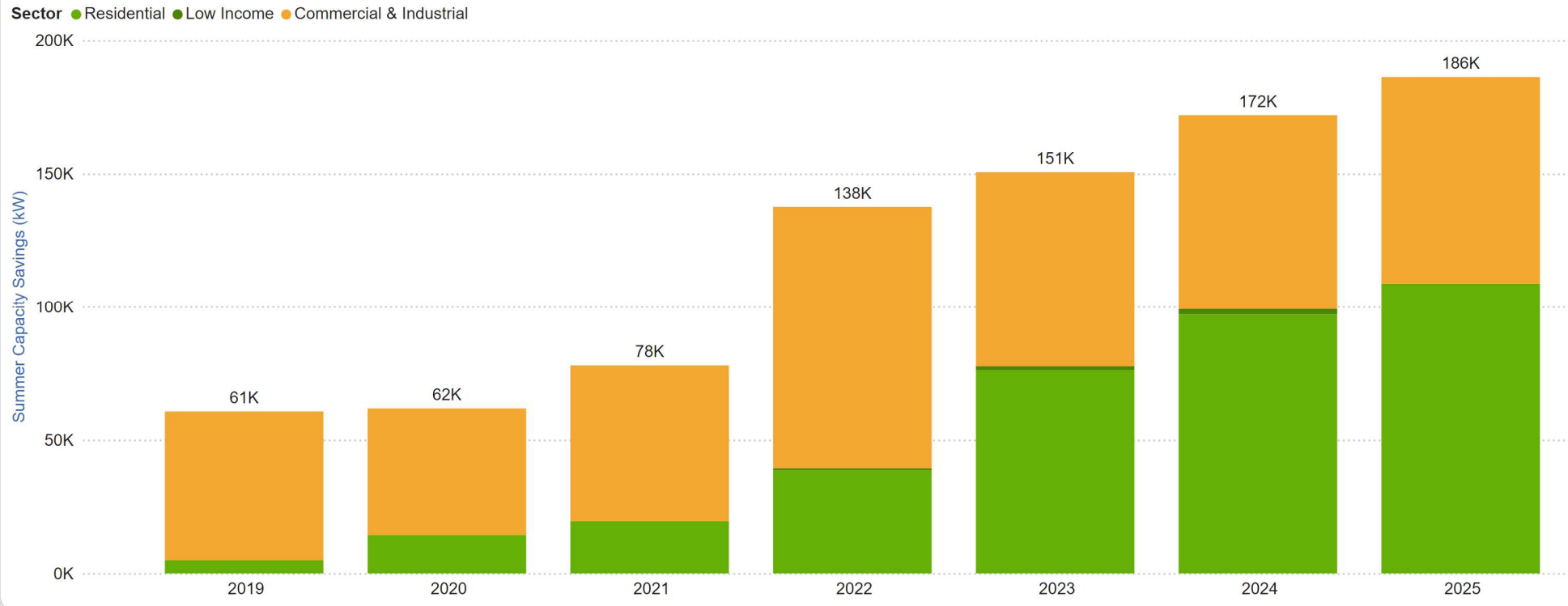
Region-wide, ConnectedSolutions now creates ~350MW of capacity relief

In 2025, the system peaked at 26 GW between 6 and 7pm on June 24th. Connected Solutions reduced peak demand by ~1.3%.



ConnectedSolutions Continues to Grow in MA

ConnectedSolutions Savings, 2019-2025



Managed Charging

- Participants enroll through either their vehicle or their charger
- Participants earn incentives for ensuring that charging happens during off-peak hours (9pm-1pm)

Emerging Areas

Vehicle to Grid ("V2G")

- EDCs are working with MA CEC on their Vehicle to Grid demonstration projects
- Both residential and commercial vehicles are eligible to participate
- Up-front equipment and installation costs are being paid for by CEC
- Vehicles are subsequently enrolled in and dispatched under the ConnectedSolutions program
- We are testing the functionality and operational components with select fleet customers before accepting more enrollments
- Results will inform the best structure for a permanent V2G offer

Flexible Interconnection

- Flexible Interconnection allows a DER, solar project, or BESS to interconnect using operating limits (export limits, charging schedules, curtailment signals, etc.) to stay within what the existing grid can accommodate instead of paying for new grid upgrades.
    - Eversource tariff M.D.P.U. No. 55G governs the process for interconnecting distributed generation and storage projects. Eversource has separately published Flexible Interconnection Offerings guidance.
    - For National Grid, tariff M.D.P.U. No. 1579 establishes the simplified, expedited, and standard interconnection processes and is the foundational tariff under which flexible interconnection arrangements would be implemented.
- Both Eversource and National Grid are considering how new *load* customers could be offered flexible connection solutions as well; more to come.

ESMP Local Grid Services

- Per DPU orders 24-10-A, 24-11-A and 24-12-A, each EDC established a Grid Services Compensation Fund (GSCF) to support delivery of local grid services projects over the five-year term of the first ESMP period.
- Each Company is taking a different approach to implementing grid services across their distribution networks; we will compare findings and learnings and adapt offerings accordingly.
- Work to date has included completion of the Grid Services Study in 2025 in conjunction with MassCEC, which has helped to inform EDC grid services valuation frameworks.

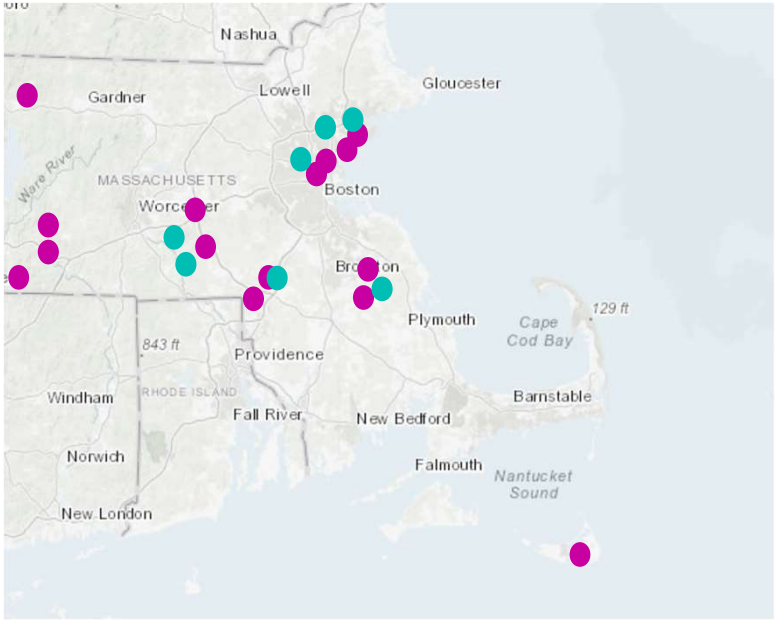
Current Grid Services Offerings

In just one year of ESMP funding, National Grid has established 15 ConnectedSolutions+ locations and 7 Non-Wires Alternative (NWA) locations across MA.

ConnectedSolutions+

Estimated kWs of Dispatchable Capacity as of May 2026**			
Location	**Dispatchable kW**	**Location**	**Dispatchable kW**
Barre-Athol	53	Nantucket	763
Bridgewater	155	Palmer	87
East Longmeadow	62	Plainville	19
Foxborough	1373	Salem	235
Lynn	31	Ware	142
Malden	17	Whitman	298
Medford	24	Worcester	14
Millbury	214		
Total Dispatchable Capacity**			**~3.6 MW**

**Includes existing capacity from ConnectedSolutions in identified areas and incremental capacity from ConnectedSolutions+



Non-Wires RFPs

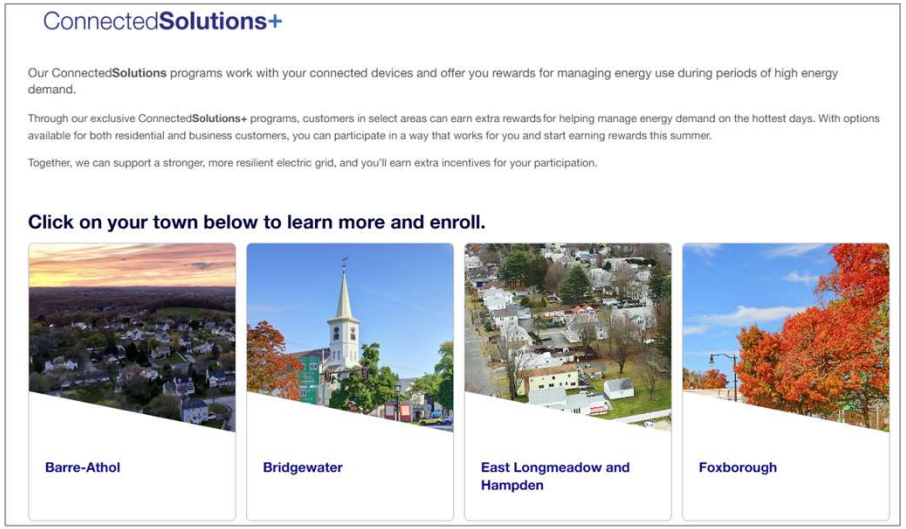
kWs of Awarded Capacity as of May 2026		
Location	**Dispatchable kW**	**Asset Type**
North Oxford	1,200	Resi BTM Battery Aggregation
Foxborough	1,930	FTM BESS
Millbury	140	Resi BTM Thermostat Aggregation
Mill St	20	Resi BTM Thermostat Aggregation
Plymouth	60	Resi BTM Thermostat Aggregation
Wellington	160	Resi BTM Thermostat Aggregation
Pine Banks (Melrose)	180	Resi BTM Thermostat Aggregation
Total Awarded Capacity		**~3.7 MW**

ConnectedSolutions+

National Grid designed and launched **ConnectedSolutions+ in 2025**, offering customers increased financial incentives to meet local grid needs. ConnectedSolutions+ is now live in **15 Massachusetts locations** in National Grid's service territory.

Program Design:

- **Location Specific Focus:** aligning DER flexibility where grid constraints are emerging
- **Unlocking More DER Value:** testing how local dispatch can reduce stress on the grid at peak times
- **Increased Incentives for Customers:** increasing incentives for customer's incremental participation



Expansion of ConnectedSolutions+:

- Live in **15 total locations** across Massachusetts
- New supplemental offerings to **further drive customer adoption:**
  - **Upfront Battery Rebate:** earn up to $7,500 for residential battery installation
  - **Direct Thermostat Install:** receive a free thermostat through MassSave Weatherization program

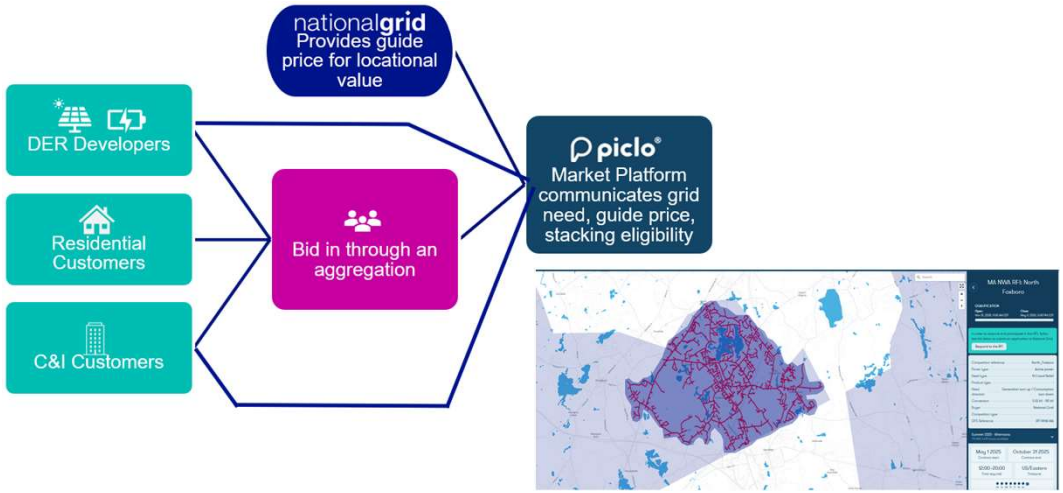
NWA RFPs

National Grid has released three RFPs via Piclo since the start of ESMP term to procure flexibility from FTM assets and BTM aggregations. The team continues to apply learnings and refines their RFP strategy based on participant feedback.

RFP Outcomes to Date:

- Received proposals from 8 vendors in 2026
- Awarded 7 bids across 3 vendors





Applying Lessons Learned:

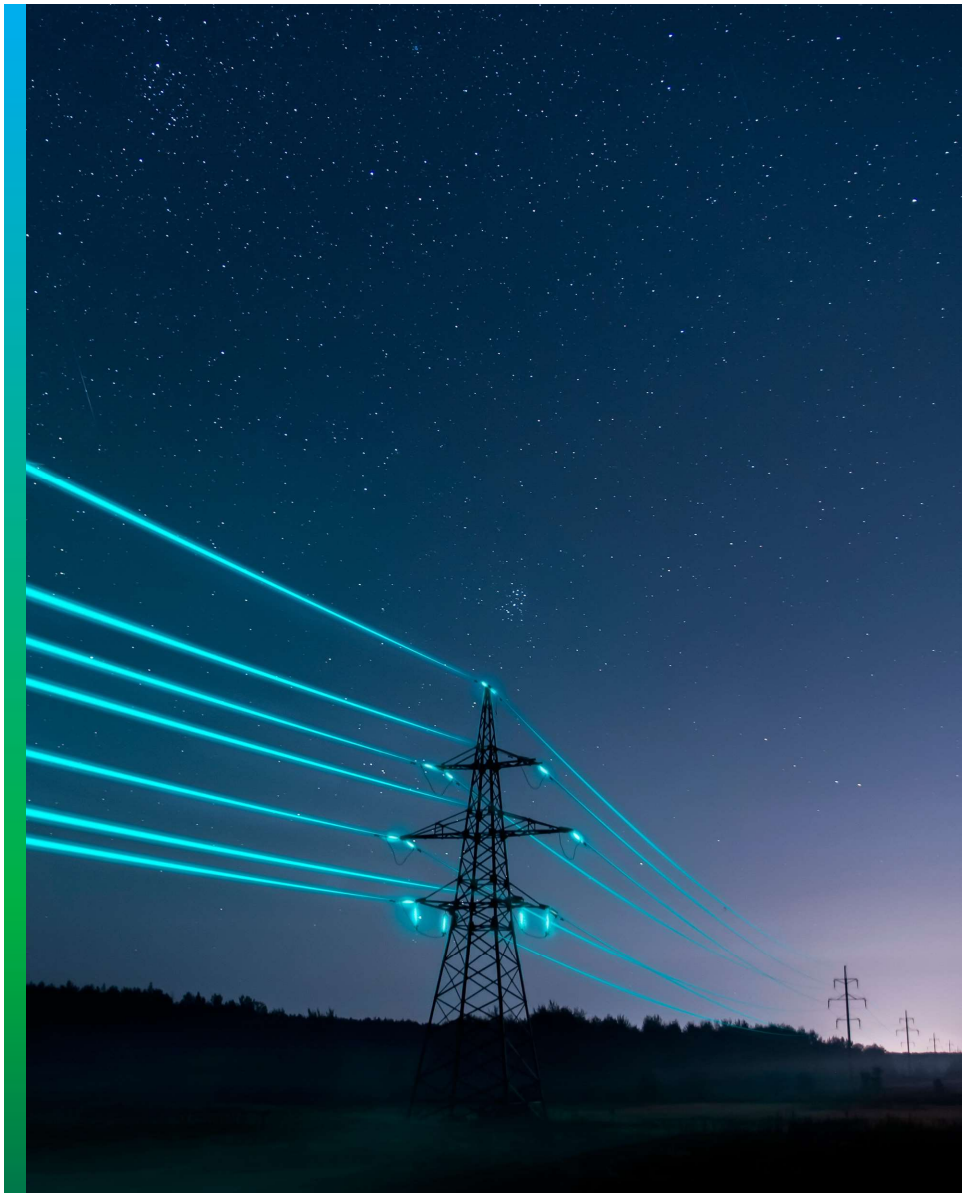
- Increasing targeted outreach to qualified vendors to leverage existing assets for grid services
- Implementing a rolling evaluation and contracting process to build a more dynamic market
- Exploring avenues to give more financial certainty to market bidders (ie, long term cost recovery)

Eversource GSCF Areas for Summer 2026

Load-Driven Bridge-to-Wires

(Boston-area Substations)

- **About 40 MW of flexible capacity** across multiple substations in the Boston area is needed in the next 5-8 years while infrastructure upgrades are completed
- Offering enhanced incentives through **ConnectedSolutions+** and **Managed Charging+**
- Engaging in **direct customer outreach,** working with market partners, to encourage enrollment



Eversource GSCF Areas for Summer 2026

Excess Solar Bridge-to-Wires

(New Bedford-area Substation)

A **first-in-the-nation approach** to using distributed batteries and EVs to absorb excess solar-generated energy to the electric grid – **"solar soaking"**

- **About 10 MW of *additional* load** is needed midday to consume the local renewable energy to ensure reliability while infrastructure upgrades are completed
- Initial season focused on **proof of concept** – developing capabilities to support new types of grid services
- 2027+ will look to scale and expand as appropriate



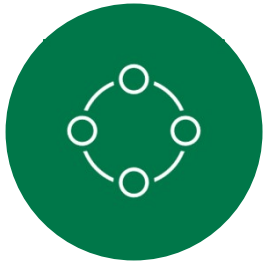
Eversource Early Insights



Strained areas of the grid tend to be **heavily residential load** – changes the nature of the DR potential



Vendor, OEM, and utility capabilities are **still evolving**; advanced use cases take time to develop



Surrounding policies must be considered – legacy rate designs may not always align with evolving grid needs



Some grid services can work in complement, **improving the value stack** for DERs (e.g. solar soaking + DR)

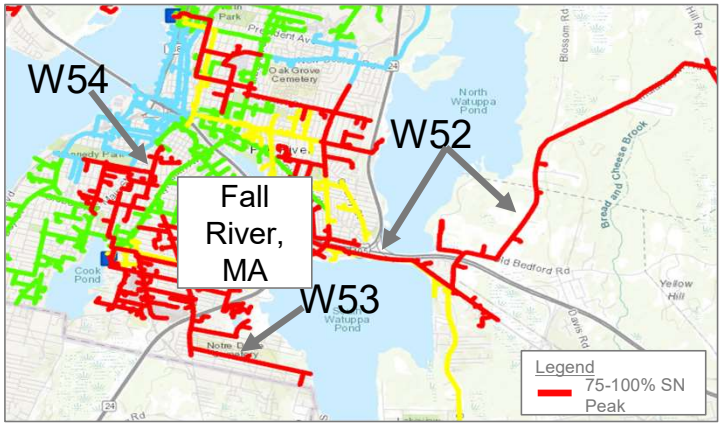
New Participation Models

BackupBattery+

The **BackupBattery+ pilot program improves resilience** for low-income customers in Fall River and **reliability of the local grid** by providing no-cost home battery systems, **removing upfront cost barrier**

- Funded by ESMP, BackupBattery+ will test how grid services can address constraints in outage-prone areas
- Program design: Eligible customers in Fall River, MA will receive a backup battery at no cost, owned by third-party partner
  - Batteries will be dispatched to provide local grid support
  - Customers will receive a $150 annual participation payment
  - Income eligibility aligned to Mass Save threshold (<60% Area Median Income)
- Launch Timeline:
  - October 2026: Program launches and enrollment begins
  - Spring-Fall 2027: Battery installations





Learnings will inform future grid services offerings, customer outreach strategies, and upcoming Equity in Grid Services pilot with MassCEC.

Building-to-Grid (B2G) Demonstration

B2G is a planned demonstration to test how all-electric buildings can use intelligent controls to operate as flexible resources and support a constrained local grid. National Grid will partner with a third-party vendor to manage building DERs and respond to dispatch signals.

Offering:

- Provide incentives to **all-electric multifamily** or **commercial buildings** in exchange for coordinated control of flexible DERs (e.g., HVAC, batteries, EV charging)
- Utility signals will reduce net load during local peaks and increase net load during low-load, high-solar generation periods

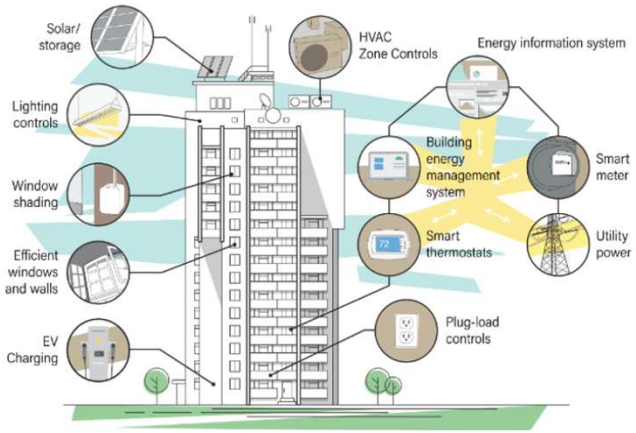
Planned Timeline:

- December 2026: Launch RFP for deployment partner
- Mid-2027 – Mid-2030: Initiate flexible load dispatches

Key learning areas to inform future local grid services & flexible load connections

- Operational performance: Reliability and responsiveness of integrated controls
- Planning value: Magnitude of flexible capacity provided to address local constraints
- Customer model: Customer experience, incentives, contracting, and protections

Maximize local grid benefit from broad range of controllable building loads



Source: ACEEE

Looking Ahead

The next generation of flexibility programs is expected to broaden participation and create additional mechanisms for delivering distribution-level grid services.

Time Variable Rates (TVR)

- Customers respond to dynamic price signals by shifting or reducing consumption
- Delivers system and distribution benefits without requiring direct dispatch
- Enables broader customer participation through rate design

Behavioral Demand Response (BDR)

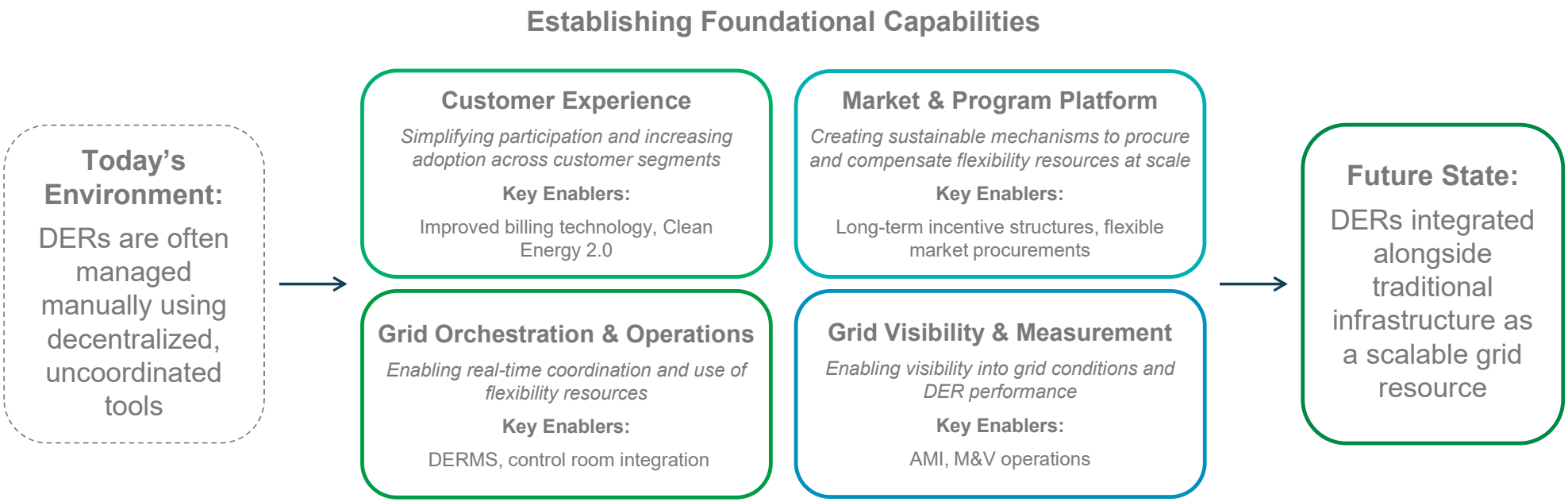
- Customers reduce load in response to targeted events and receive an incentive for their performance (enabled with AMI)
- Creates a foundation for future dispatchable demand-side resources outside of programmatic parameters

Both TVR and BDR extend the flexibility resource pool beyond traditional DER programs, increasing the range of customers capable of supporting distribution system needs.

Capabilities to Support Scale

We are defining and delivering the capabilities to use DERs at scale

As we transition to using DERs at scale, we are scoping and deploying key capabilities to enable our vision.



We will Continue to Refine Grid Services Programs

- Coordinating distribution and wholesale market objectives requires clear resource prioritization, participation rules and customer impact considerations
- DERs must be supported by commercial and operational mechanisms that deliver reliability comparable to traditional grid investments
- Flexibility procurement strategies must account for the point at which additional DER participation no longer creates incremental grid value
- Reliability may vary by technology type, service provider and contractual arrangement

Questions?

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