

Demand-side Energy Management in New England

A Guide to Earning Revenue by Reducing Demand During
Critical Periods

How will curtailing energy affect your business?

- CPower has a team of energy experts who live and work in New England and will help you develop your energy curtailment strategy and maximize your demand response participation.
- Your CPower Team will perform a complete assessment of your facilities to understand your energy needs, usage and load profile.
- We'll work with you to develop and fine tune an energy curtailment strategy that suits your specific business needs.
- We'll then identify where your organization can cut back on energy and still meet the needs of day-to-day business.
- Once your customized strategy is in place, your CPower Team continues to work closely with you to refine your energy management efforts and maximize your results.

The Value of Curtailment

- Many demand response programs in New England are provided by Curtailment Service Providers (CSPs), also known as Market Participants, that have been approved by the Independent System Operator of New England (ISO-NE) to provide your demand response participation.
- CSPs are experts at helping organizations like yours maximize your demand response participation.
- Getting the most out of demand response begins with choosing the right CSPs to manage your demand response participation.

What is a Curtailment Service Provider (CSP)?

- A CSP is a third-party entity (separate from the bulk electric grid operator or risk and utility) that handles the demand response participation of many organizations to ensure effective curtailment takes place when the grid is stressed.
- CSPs ensure safe, efficient energy curtailment that results in larger incentive payments for the participating organization.
- The CSP's mission is to optimize the participant's demand response in a way that maximizes reward
- As your CSP, CPower will work with your organization to develop a customized curtailment strategy that suits the specific needs of your business.

Active Demand Capacity Resource (ADCR)

Minimum Size	100 kW
Eligibility	Load Reduction through curtailment or permitted distributed generation.
Participation	Summer Season (Jun-Nov, Apr-May) and Winter Season (Dec-Mar) during each Program Year (Jun-May).
Enrollment Deadline	April 15 for start of Summer, October 15 for start of Winter, interim enrollment possible.
Metering	Each account must have a 5-minute interval meter installed by CPower or equivalent.
# & Duration of Load Response Event(s)	Program in effect year round. Customers typically called 5 hours or less per year
Notification	Customers will receive dispatch notices 30 min prior to event per customers contracted instructions.
Testing	At a minimum, a one-hour test event will be called twice per year (once per season).
Compliance	Customers must meet their performance obligations during events and test events.
Consequences of Non-Perf.	Customer payments will be reduced proportionately to their actual performance.
Capacity Payments	Monthly payment (\$/kW) based on annual Forward Capacity Auction price & customers' demonstrated ability to curtail.
Energy Payments	Payment (\$/kWh) made at prevailing real-time hourly energy prices for all kWh curtailed from baseline usage during events and tests.
Settlements	Customers receive quarterly payments

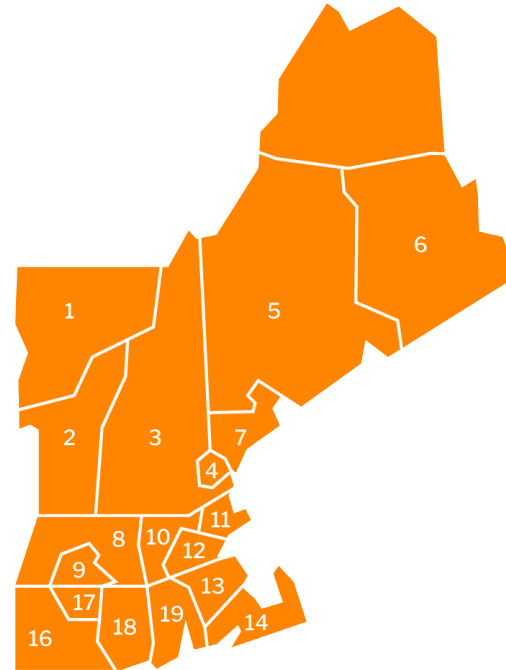
ADCR Event History

2019- 2024

Year	# of Events	Hours*
2019	0	0
2020	0	0
2021	0	0
2022	1	2
2023	3	5
2024	2	4

* - Total hours represent all events called across all Zones over a year

ISO-NE Dispatch Zones



- 1 • Northwest Vermont
- 2 • Vermont
- 3 • New Hampshire
- 4 • Seacoast
- 5 • Maine
- 6 • Bangor Hydro
- 7 • Portland ME
- 8 • Western MA
- 9 • Springfield MA
- 10 • Central MA
- 11 • North Shore
- 12 • Boston
- 13 • SEMA
- 14 • Lower SEMA
- 15 • Norwalk-Stamford
- 16 • Western CT
- 17 • Northern CT
- 18 • Eastern CT
- 19 • Rhode Island

ADCRs get dispatched based on price. The above # of events is for ADCRs with high priced offers in the energy market.

Passive (On-Peak) Demand Response

- Another participation model in ISO-NE is the On-Peak Demand Response model which awards organizations for providing non-dispatchable load reductions during certain key hours
- Unlike ADCR, these resources perform as they normally do for the host customers but are rewarded for load they remove from the electric grid during defined peak performance hours in summer and winter. Eligible behind-the-meter resources include solar, fuel cells, co-generation systems, combined heat and power systems (CHP), and any energy efficiency project that reduces demand on the electric grid.
- Passive Demand Response participants are compensated for their reduced electricity consumption during both the summer and winter peak hours.

Passive (On-Peak) Demand Response

Minimum Size	100kw (can aggregate to reach this threshold)
Eligibility	Energy Efficiency projects and Distributed Generation including renewables contributing load reduction during performance hours.
Participation	Summer Season (Jun-Nov, Apr-May) and Winter Season (Dec-Mar) during each Program Year (Jun-May).
Enrollment Deadline	April 15 for start of Summer, October 15 for start of Winter, interim enrollment possible.
Metering	Requirements vary by project type. In some cases metering is not required..
On-Peak Performance Period	Performance hours are: • 1 to 5 p.m. (Eastern Prevailing Time) during the Summer Performance Months (Jun-Aug) • 5 to 7 p.m. (Eastern Prevailing Time) during the Winter Performance Months (Dec-Jan)
Performance Data Reporting	CPower will submit monthly performance data to ISO-NE. Customer or designated 3rd party may provide interval data to CPower if metering not installed or read directly by CPower.
Capacity Payments	Monthly payment (\$/kW) based on the annual Forward Capacity Auction price and customers' demonstrated average hourly demand reduction during On-Peak Hours.
Settlements	Customers receive payments 90 days after each calendar quarter.
Compliance	Customer must ensure asset is operational.
Consequences of Non-Performance	Customer payments will be reduced proportionately when asset is not operational.

Forward Capacity Prices

as determined by annual auctions, published ISO-NE

Gross Capacity Values

\$/MW Year

YEAR	Zone	Capacity Value
2023-24	ALL	\$24,000
2024-25	NEMA, SEMA, RI	\$47,760
2024-25	NH, VT, and ME	\$29,760
2024-25	Rest-of-Pool	\$31,320
2025-26	NEMA, SEMA, RI	\$31,680
2025-26	NH, VT, ME	\$30,360
2025-26	Rest-of-Pool	\$31,080
2026-27	ALL	\$31,080
2027-28	ALL	\$42,960

Utility Demand Response Programs

- National Grid, Eversource, Rhode Island Energy, Unitil, Liberty Utilities and Cape Light Compact offer several Connected Solutions programs to reduce demand on the New England electric grid during the late afternoon on the hottest days of the year, when the regional peak hourly demands occur. To help keep their grid healthy and reliable, these utilities offer Connected Solutions, a demand response program now in its fifth year that pays businesses to use less energy during peak demand periods.
- Efficiency Maine offers the Demand Response Initiative that also strives to reduce demand on the electric grid during the hottest days of the summer.
- On behalf of these utilities CPower will facilitate your participation in their demand response programs and to help optimize your demand response participation.

Connected Solutions TARGETED DISPATCH

Minimum Size	None specified; batteries <50 kW would only be eligible for participation under the residential program
Participation	Summer Season (Jun-Sept)
Number & Duration of Events	Summer Season: 3-hour event duration, 4-6 events expected, event window is 3pm – 8pm weekdays.
Notification	Day-ahead notification of DR events based on the system peak load forecast
Program Value	Summer: \$45 / kW * Seasonal performance average. (\$25 / kW for Liberty ; \$35/ kW for Eversource and Unitil in NH); RIE - \$35 / kW
Settlements	Settled on hourly performance results, paid at end of season.
Compliance	Pay for performance. Average performed curtailment (kW) across all events for the entire season.
Consequences of Non-Performance	Customer payments will be reduced proportionately to their actual performance.
Testing	No performance test.
Enrollment Deadline	May 31st for Summer Season
Metering	Interval Meter required.
Eligibility	Load reduction through curtailment and in some states permitted generation. However Evercourse, CT is proposing to eliminate fossil generation from the program, effective June 2025, and RIE is signaling that it plans to do the same in 2027.

Connected Solutions - Targeted Dispatch

Summer Events	Number of Events – Targeted Dispatch			
Year	Eversource	CapeLight	NGrid	Unitil
2018	-	-	2	-
2019	3	3	1	1
2020	3	3	3	3
2021	5	4	6	5
2022	6	6	6	6
2023	6	6	6	6
2024	4	4	4	4

Connected Solutions DAILY DISPATCH

Minimum Size	No minimum load specified. C&I customers are eligible to participate in C&I Connected Solutions. Batteries of 50 kW or less would be eligible for incentives under the residential battery program
Participation	Summer Season (Jun-Sept), most events in July and August.
Number & Duration of Events	2- or 3-hour event duration, 40 events expected, maximum of 60, event window is 3pm – 8pm weekdays and weekends.
Notification	Day-ahead notification of DR events based on the system peak load forecast.
Program Value	Massachusetts and Connecticut: \$200 / kW (Seasonal performance average) Rhode Island: \$275 / kW (Seasonal performance average)
Baseline (CBL)	Battery output (baseline calculation used for non-battery participation)
Settlements	Settled on hourly performance results, paid at end of season.
Compliance	Pay for performance. Average performed curtailment (kW) across all events for the entire season.
Consequences of Non-Performance	Program is voluntary. Customer payments will be reduced proportionately to their actual performance.
Testing	No performance test.
Enrollment Deadline	May 31st for Summer Season
Metering	Interval Meter required. State-of-charge, charge and recharge telemetry needed for battery storage.
Eligibility	MA utilities: any technology (except fossil gen) or load curtailment; Connecticut utility (Eversource) - any technology (except fossil gen) or load curtailment, Rhode Island utility (RIE) any technology (including fossil generation) or load curtailment but we expect fossil generation participation to be eliminated in 2027

Efficiency Maine DEMAND RESPONSE INITIATIVE

Minimum Size	None specified
Participation	Summer Season (Jun-Sept)
Number & Duration of Events	Summer Season: 3-hour event duration, 3-5 events expected, event window is 3pm – 8pm weekdays.
Notification	Day-ahead notification of DR events based on the system peak load forecast
Program Value	Summer: \$40 / kW * Seasonal performance average.
Settlements	Settled on hourly performance results, paid at end of season.
Compliance	Pay for performance. Average performed curtailment (kW) across all events for the entire season.
Consequences of Non-Performance	Customer payments will be reduced proportionately to their actual performance.
Testing	No performance test.
Enrollment Deadline	May 31st for Summer Season
Metering	Interval Meter required.
Eligibility	Load reduction through curtailment and permitted generation.

Connecticut Energy Storage Solutions

- Program is open to new and existing behind the meter batteries at Eversource or UI customer sites
- Can be stand-alone or coupled with generation
- New batteries earn an upfront incentive and a performance incentive and are required to "passively dispatch" during certain hours in the summer and respond to dispatch instructions during summer and winter
- Existing batteries earn the performance incentive for responding to dispatch instructions during summer and winter
- Rates are locked in for 10 years

Connecticut Energy Storage Solutions

Minimum Size	None specified
Participation	Summer Season (Jun-Sept) and Winter Season (Nov – March)
Number & Duration of Events	30-60 summer events; 1-5 winter events
Notification	Day-ahead notification
Program Value	See next slide
Settlements	Performance Incentive is settled on hourly performance results, paid at end of season.
Compliance	Comply with passive dispatch requirement; active dispatches are compensated on a pay for performance basis
Consequences of Non-Performance	Customer payments will be reduced proportionately to their actual performance.
Testing	No performance test.
Enrollment Deadline	May 31st for Summer Season, can enroll mid season
Metering	Interval Meter required.
Eligibility	Behind the meter battery at an Eversource or UI customer site

Connecticut Energy Storage Solutions

 **Commercial and Industrial Customer**
Upfront Declining Incentive Block Structure

Tranche 3 Enrolled Capacity	Tiered Upfront Incentive (\$/kWh)			Priority Customer Adder
	Small Commercial (\$/kWh)	Medium Commercial (\$/kWh)	Large Commercial (\$/kWh)	
0 to 50 MW	\$182.00	\$159.25	\$91.00	+25%
50-75 MW	\$164.00	\$143.50	\$82.00	+25%
75-126.1 MW	\$146.00	\$127.75	\$73.00	+25%

 **Commercial and Industrial Customer**
Annual Performance-Based Incentive

Season Incentive (\$/kW)	Years 1-5		Years 6-10	
	Summer	Winter	Summer	Winter
	\$200	\$25	\$115	\$15