



Eversource Demand Reduction Demonstration Project Update

MA EEAC – PDR Sub Committee

February 23, 2017 (DRAFT AS OF FEB 16, 2017)



Projects that Require Budget Authorization



D.P.U. Procedural Schedule

| Date | Action |
|-----------------------------|---|
| Feb 10 | Notice of intent to file intervenor testimony |
| Feb 17 | Intervenor testimony due |
| Mar 3 | Deadline to issue discovery requests |
| Mar 17 | Final discovery responses due |
| Mar 20 | Company rebuttal testimony due |
| Mar 22 | Deadline for parties to request evidentiary hearing |
| Mar 29 & 30 | Evidentiary hearing (if requested) |
| 2 weeks after hearings | Simultaneous initial briefs due |
| 1 week after initial briefs | Simultaneous reply briefs due |

In the meantime...

- We have worked with 3rd party to review all RFP responses and gather clarifying information from vendors as needed
- We have worked with distribution / system planning to understand where system congestion is occurring
- We have begun reviewing contract language used for dispatchable assets in other jurisdictions as a potential basis for our own contracts
- Reviewed different business models

Projects That Do Not Require Additional Budget Authorization



- Industrial audits
 - Types of peak demand reduction measures that have come up include:
 - Rescheduling batch processes to off peak hours
 - Equipment arbitration schemes; i.e., using software/controls to stagger equipment such as extruders and spray room ovens,
 - Localized battery storage (behind the meter batteries for specific pieces of equipment)
- On-site facility training
 - The training will cover:
 - EE (specifically energy management and controls, mechanical systems, steam systems, lighting, and plug load), and
 - Demand strategies (with an emphasis on reducing load during peak hours).
- Controls
 - Eversource and other PAs are working with a quick-service franchised chain to install and evaluate the installation of an energy management system, LED lighting, spray valves and refrigeration controls.
 - To date, installation has been completed in 40% of the approximately 300 enrolled franchise locations in eastern Massachusetts.
- Lab Ventilation
 - Eversource intends to determine the efficacy of novel air quality monitoring procedures to adjust ventilation rates in laboratory spaces

Sample Demand Curriculum for Onsite Facility Training



Table 6 - Sample Demand Strategies Module

| Module Description | Target Audience | Objectives | Lesson Plan | Expected Outcomes |
|--|---|---|--|--|
| <p>This module is designed to address the facility's load profile, what equipment drives KW demand during peak hours, and whether any loads can be shifted to off-peak times.</p> <p>The operator will have the tools necessary to identify where building loads can be reduced from learned demand strategies in previous training modules without affecting occupant comfort.</p> <p>The operator will understand how to read interval data to see the impact of implemented strategies.</p> | <ul style="list-style-type: none"> • Facility Managers • Energy Managers • IT Technicians • DDC Operators • DDC Programmers • Maintenance Staff | <ul style="list-style-type: none"> • Determine the facility's high demand reading, preset demand limiting levels, and off peak demand readings using utility bills and DDC output. • Identify all equipment load output and determine if any load reduction features are installed. Identify greatest opportunities for load reduction on equipment replacement. • Identify areas of the facility that are not part of the critical operation. And those that are "Time-Programmed Controls" such as lights, fans etc. • Program an algorithmic sequence to the DDC for equipment that has timed program controls to go to setback mode. • Identify any large loading during daily start-up. Consider staggered start times or other strategies to reduce peak. • Create trending reports that illustrate actual demand usage. Set alarm points, as needed. | <ul style="list-style-type: none"> • Show participants how to analyze demand readings from utility billing and trending logs. • Review major equipment operating parameters and identify existing load reduction features on equipment schedules. • Provide a flow chart illustrating equipment on timed controls. Illustrate a program setback sequence that interfaces with the DDC. • Provide hands on training on the DDC display screens pertaining to operating a load reduction event. • Show how to utilize demand trend logs and reports. • Set high demand limits. Develop prioritized plan to reduce or shift loads starting with non-critical areas when needed. | <p>Reduce demand by optimizing demand limiting equipment and modifying the DDC equipment scheduling program.</p> <p>Facilitate participation in load shedding programs, if available.</p> <p>Prepare a plan for the DDC programmer to automate regulation in identified changes in kWh usage, hourly demand (KW) and therms.</p> |