



MEMORANDUM

To: DE 15-137 Stakeholders
From: Brian Buckley, NEEP Policy Team
CC: DE 15-137 Service List
Date: August 4, 2015
Re: Peak Load Savings Targets, Demand Response, and Peak Coincident Energy Efficiency Measures

Summary:

Our view is that it would be within the authority of the Commission to include demand response (DR) targets—along with other more cost-effective peak coincident EE measures—if choosing to assign MW reduction goals. However, I must note that neither staff’s straw proposal nor the most recent potential study cover MW savings goals or potential, so assigning such goals for the current proceeding based on the findings of a six year old potential study that didn’t cover currently emerging demand response opportunities might be beyond the current scope of this proceeding.

Analysis:

Below we have compiled:

- (1) Background on Peak Savings Targets from other jurisdictions;
(2) New Hampshire’s current experience with DR; and
(3) A summary of a recent Pennsylvania proceeding contemplating assignment of DR goals; and
(4) Some peak/DR relevant items from other jurisdictions:

1. Peak Savings Targets in Relevant Jurisdictions:

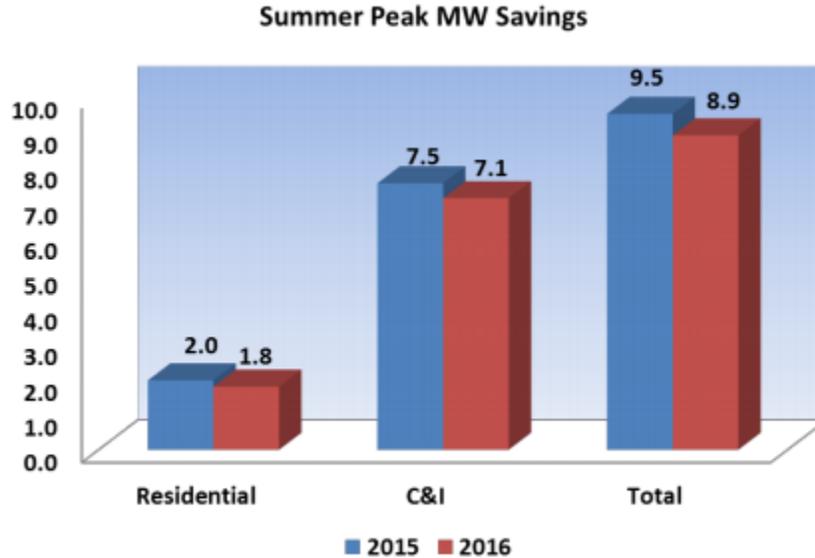
According to ACEEE’s April 2015 EERS Brief, Rhode Island and Vermont are the only jurisdictions with “Demand Response” targets within their EERS (Pennsylvania would now make three). However, I’m not sure how accurate this is because looking through their savings goals, I see targets expressed only as kW reductions, not specifically as DR goals.

Table with 4 columns: Jurisdiction, Sumer Peak Load, Annual Summer MW Reduction Target, MW Target as Percent Peak Load. Rows include Vermont, Rhode Island, New Hampshire, and 2009 New Hampshire Potential Study (Potentially Achievable, Max Achievable Cost Effective, Max Achievable Potential).



2. New Hampshire Current Experience with DR

- Current annual peak demand savings under the core programs (~9MW) described below, excerpted from [2015-16 Core Programs](#) (pg 58)



- NH 2014 Draft Energy Strategy mentions Demand Response [only briefly](#), in the context of ISO-NE's capacity market, and the potential for innovations opening up behavioral and residential DR opportunities (pg 56)
- The [straw proposal](#) makes no mention of peak demand
- The [2013 NH Potential Study](#) contains no substantive discussion of demand response.
- The [2009 NH Potential Study](#) (pg 15) contains no substantive mention of demand response, but does identify potential scenarios for EE savings as a % of peak electric demand:
 - i. **Technical Potential:** 21.6% (642.7 MW)
 - ii. **Max Achievable Potential:** 17.6% (525.9 MW)
 - iii. **Max achievable Cost-Effective:** 15.3% (455.3 MW)
 - iv. **Potentially Obtainable:** 8.5% (254.5 MW)
 1. Since the study covers a 10 year period, that the potentially obtainable number would represent ~25 MW average savings per year, likely beginning with a slightly lower target and ramping up to a higher one.



3. Pennsylvania Act 129 Phase III Programs and DR:

- **DR's Cost Effectiveness Relative to EE Measures**

A key question regarding the Pennsylvania PUC's extension of their Act 129 Energy Efficiency and Conservation Programs into Phase III was whether or not to revive intrastate demand response targets *which had been eliminated during Phase II due to their low-cost effectiveness relative to the extended duration of EE measures.* ([ACT 129 Phase III Order](#), pg 31-36) The low cost-effectiveness of demand response can be especially detrimental to EE programs that face budget constraints, which is the case in Pennsylvania. Pennsylvania is the only state I know of that has explicitly mandated DR goals for their utilities, rather than mandating peak demand reductions.

- **The 90/10 Methodology.**

Ultimately, the PUC chose to bring back the intrastate DR Program targets, but recognizing that "EE may provide more 'bang for the buck' in that it not only reduces consumption but also provides coincident peak demand reductions," they chose to set targets according to a 90/10 funding allocation methodology, assuming that only 10% of program funding would be assigned to DR, and only in those utility service areas where cost effective DR potential had been identified by the Statewide Evaluator. A number of other program details are bulleted on page 43-44 of the [Order](#).

- **Intrastate DR Program Design and Concerns of Conflict with Interstate Markets**

The commission had originally forbid payment of Act 129 EE&C Program funds for intrastate DR programs to a customer for an event during which the customer was already curtailing due to signals from PJM (and received payment from PJM) under their Emergency Load Response Program (ELRP). After comments from many stakeholders noting that DR targets would be unachievable under the 'forbidden dual participation' framework, they revised their Order to allow dual participation. In the end, they prescribed at 50% discount on Act 129 DR incentives for customers who had already enrolled in PJM's ELRP.

4. Other notable kW target/DR discussions from throughout the region:

- **Maryland**

Maryland has the most robust DR programs in the region, accounting for ~1/3 of Empower Maryland expenditures [during 2013](#) (pg 20-21). This is likely because the EmPower enabling legislation had required reducing per capita peak demand by 15% during a six year period.

- **Massachusetts**

The Massachusetts Joint PA's are actively exploring opportunities for Demand Response, but have made no hard commitments in the coming program plan ([pg 153/222](#)). They do however commit to peak savings goals.

- **Behavioral Demand Response**

Vermont is currently examining the cost-effectiveness of a behavioral demand response pilot. ([pg 49-50](#)) and others are exploring [similar initiatives](#).