



nationalgrid

2017 Demand Response Demonstration Offering Update

MA EEAC
November 15, 2017

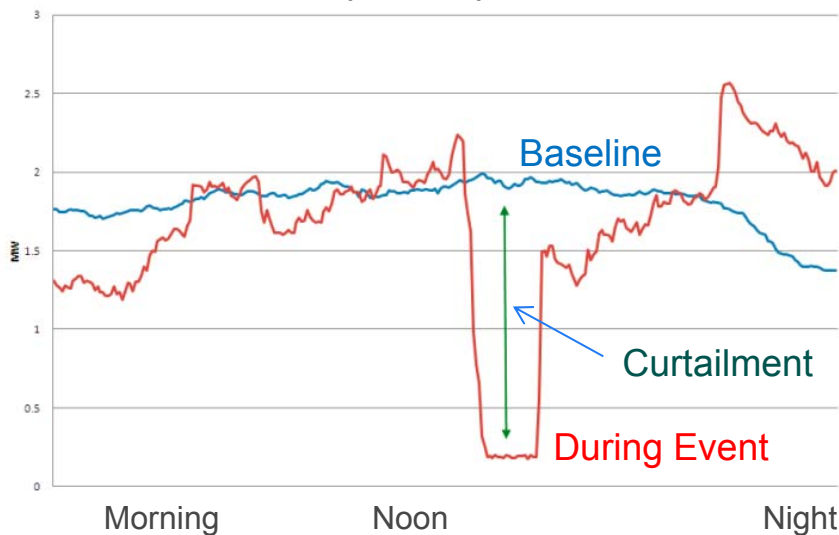
Planned Offering Overview



- National Grid included a DR Demonstration Offering in the 2016-2018 Plan
 - Residential demonstration with a target of 2.6 MW of peak demand reduction
 - C&I demonstration with a target of 41 MW of peak demand reduction

Commercial and Industrial Customers

“Performance Based” – Customer Incentive of about \$35 per kW per Year



Residential and Small Commercial Customers

“Pay for Connected Device” – Customer Incentive of about \$30 per Thermostat per Year

Supported devices so far



Honeywell



ecobee



Nest

Update for Large C&I Customer Demonstration



Enrollment

- Enrolled 20.6 MW
- Enrolled 98 Customers

Performance

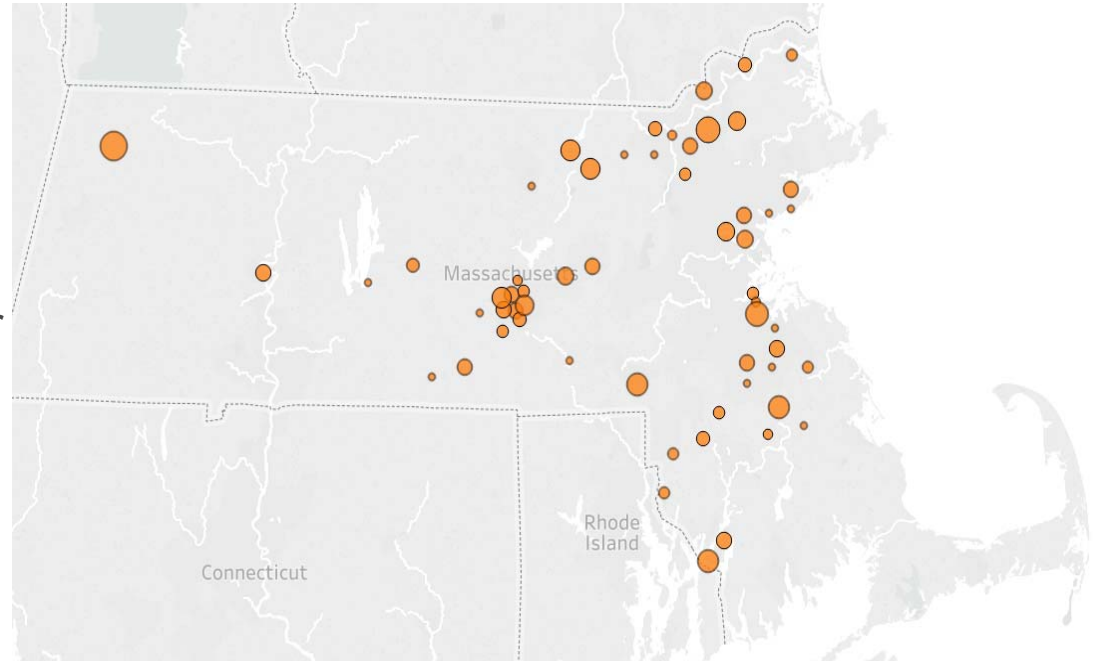
- Called 2 Events this Summer

Results & Evaluation

- Evaluator Calculating Customer Performance
- ETA: End of November

Improvements for Next Year

- Enrolling more customers & MW
- Streamline Incentive to simply \$/KW-yr to simplify communication to customers
- More Training for Sales Representatives
- Will allow generators, cogen, and existing FCM Participants to expand pool of potential customers



Update for Residential Demonstration



Enrollment

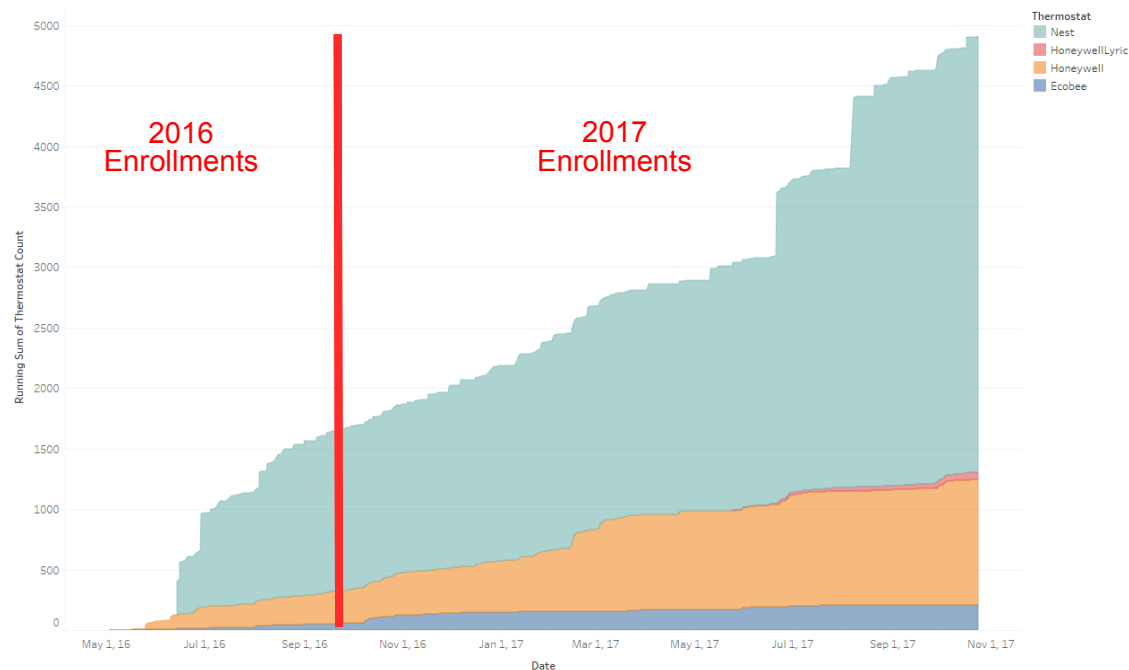
- Enrolled ~2 MW
- Enrolled 4,800 Wifi TStats
(170% increase from Sept. 2016 – mainly through OEM marketing outreach)

Performance

- Called 9 Events this Summer

Results & Evaluation

- Evaluator Calculating Customer Performance
- ETA: End of January 2018



2017 Implementation Updates

- Assessed new-to-market connected devices and determined there was not a sufficient population to warrant investment, at this time
- Focused on connected devices with near-term potential using logical investment criteria approach

Improvements for Next Year

- Reduce Cost Through Competitively Procured Contracts with demand response management system (DRMS) vendor and device vendors
- Streamline Enrollment Flow

Preliminary Results of Residential Demonstration



PRELIMINARY FINDINGS

Participation Status	2016	2017
Full participant	66.0%	68.5%
Opt-out	19.6%	15.1%
System off/heat	10.8%	13.2%
Failed	2.2%	1.8%
No connectivity	1.3%	1.4%

- Connectivity improved slightly from 15.8% to 13.5%
- Navigant's 2017 reclassification based on system mode shifted about 20% of thermostats from full participants to non-participants

Participation Status Definitions:

Full participant

- Thermostat used the efficient DR setpoint, or a more efficient setpoint for the full event

Opt-out

- Thermostat actively opted-out of an event, either before or during the event

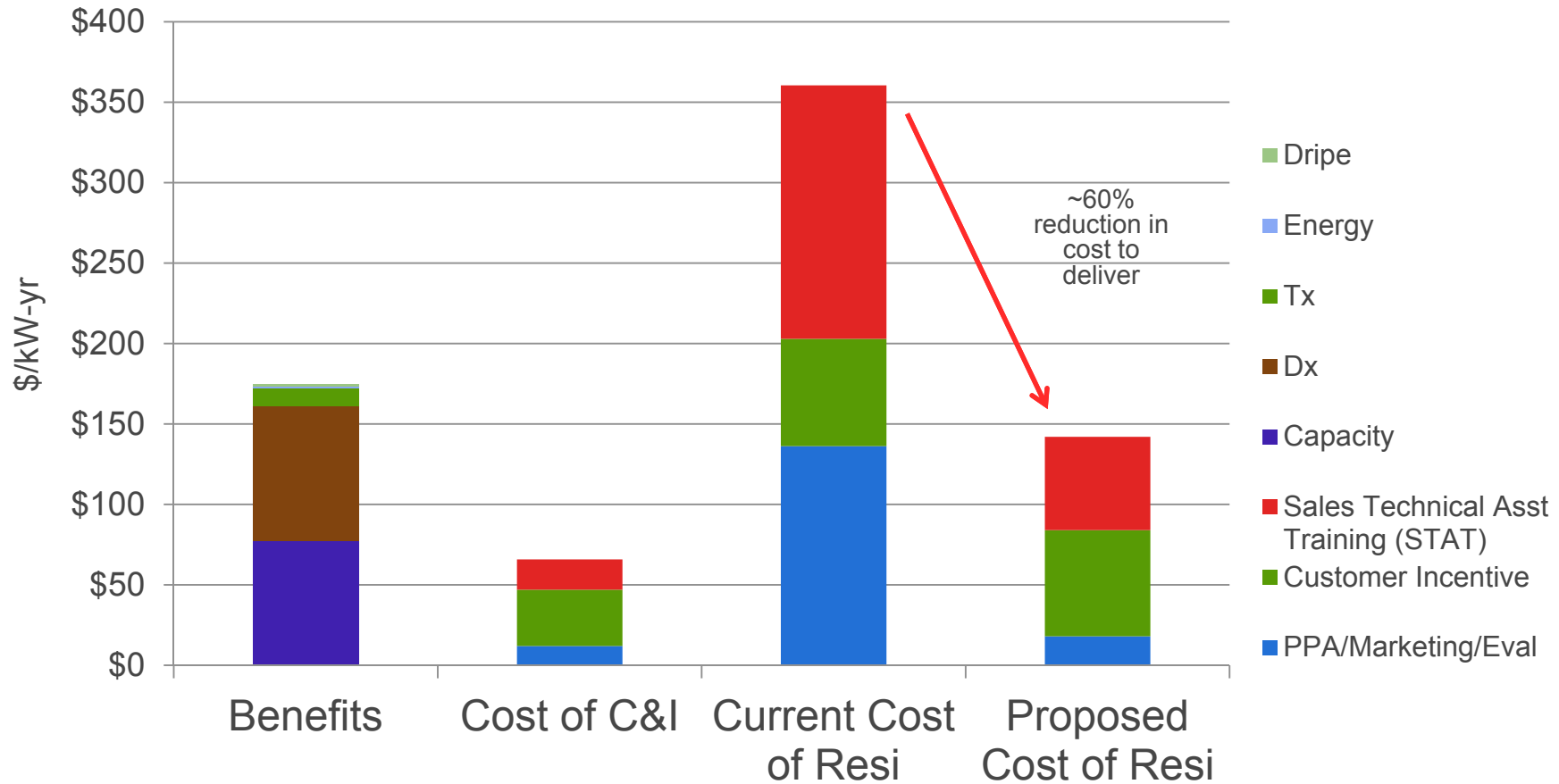
Non-participant

- Thermostat did not participate during the event because system was turned off prior to event notification, or in heating mode

No connectivity

- Thermostat data indicates there was no connectivity during the DR event. Thermostat may or may not have participated in the event

Cost Effectiveness of National Grid Demonstrations



Cost effectiveness of the Residential Demonstration is still a challenge. However, we are taking steps to reduce all possible costs to achieve cost effectiveness before the end of the demonstration.

Thank you