



# Cape Light Compact Demand Response Demonstration Offering

2016-2018



# Offering Overview



- CLC included a DR Demonstration Offering in 2016-2018 Plan
  - Focused mainly on residential customers
  - Goal: Learn how to best engage residential customers in demand response, use experience to inform further DR program development
  - Offered participants a WiFi thermostat and near real-time energy monitoring equipment, monitored/controlled via app and/or web
    - Participants must have central a/c controlled by wall-mounted thermostat
  - Participants' thermostat set points were adjusted during DR events called by CLC
  - Events called based on weather and system load predictions
    - Targeted load rather than energy prices
- Also developing behind-the-meter thermal storage demonstration projects for small-medium C&I customers

# 2016 Recap



- Numbers
  - 9 DR Events
  - 26 participants enrolled, 37 thermostats installed
    - More signups pending installation
  - ~160 thermostat DR events called
- Successes
  - Very low opt-out rate for events
    - Savings being evaluated
  - Overall, concept was well-received by customers
- Challenges
  - Limited pool of applicants – fewer central a/c customers than expected - incorporating customers with ductless mini-splits into the demonstration offering
  - No smart metering for reduction measurement
    - Monitoring equipment installation = slower deployment
    - Real-time energy usage monitoring is expensive
  - Vendor platform challenges resulted in less complex event structure
    - Most events were called as opt-out only

# 2017: Expansion & Improvements



- Platform Improvements
  - Develop algorithm to call events to target demand
  - Day-of baseline adjustment
- Expanding participation
  - Increasing number of compatible thermostats
  - Leverage thermostats installed through HES, and include offering information in HES packets
  - Bring Your Own Thermostat (BYOT) for customers with eligible thermostats already installed
  - Expanding equipment compatibility to increase participation
    - Plan to incorporate load control for ductless mini-split systems
- Reduce costs by eliminating energy monitoring equipment
  - Use currently enrolled customers with monitoring equipment to help model demand reductions
- First small C&I thermal storage demos deployed before summer 2017

**Thank you**