



Northeast Energy Efficiency Partnerships

Putting More Energy into Peak Savings:

Trends Toward IDSM in the Northeast and Mid-Atlantic

September 15, 2016

National Governors Association
Webinar

NORTHEAST ENERGY EFFICIENCY PARTNERSHIPS



*“Accelerating and transforming markets for energy efficiency
in the Northeast & Mid-Atlantic States”*

Mission

Accelerate energy efficiency as an essential part of demand-side solutions that enable a sustainable regional energy system

Vision

Region embraces Next Generation Energy Efficiency as a core strategy to meet energy needs in a carbon-constrained world

Approach

Overcome barriers and transform markets via
Collaboration, Education and Enterprise



One of six Regional Energy Efficiency organizations (REEOs) funded by the U.S. DOE to support state efficiency policies and programs.

Integration of Energy Efficiency and DR: Integrated Demand Side Management (IDSM)

IDSM programs “...support two out of the three demand side technology types (EE, demand response, and distributed generation).

-California Public Utilities Commission



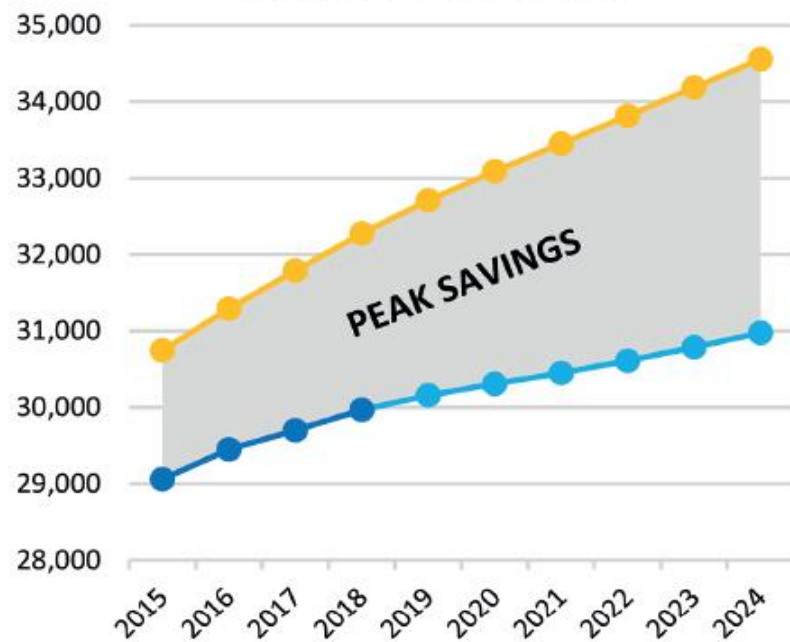
IDSMS Policy Drivers:

Declining Load Factor

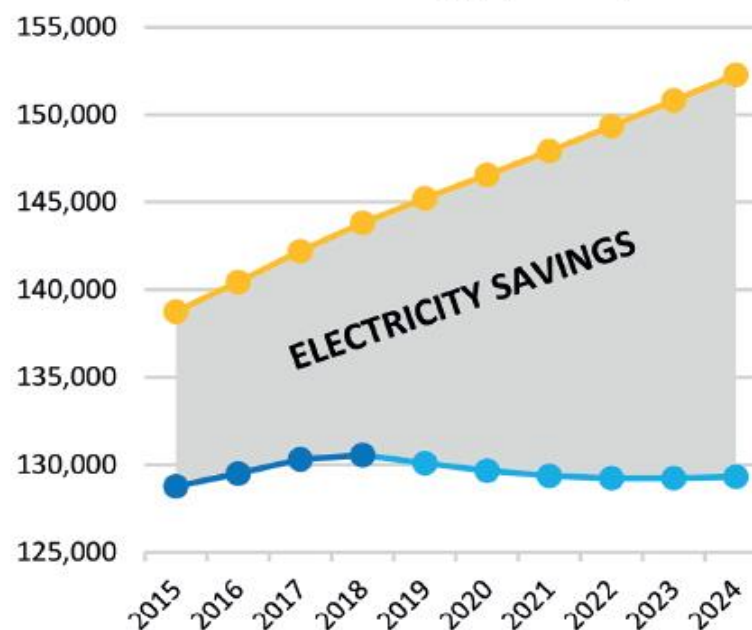


In ISO-NE, investment in energy efficiency will decrease overall load growth, but peak demand continues to grow spreading MW costs over fewer MWhs.

Summer Peak (MW)



Annual Energy (GWh)



— The gross forecast of peak demand and energy use

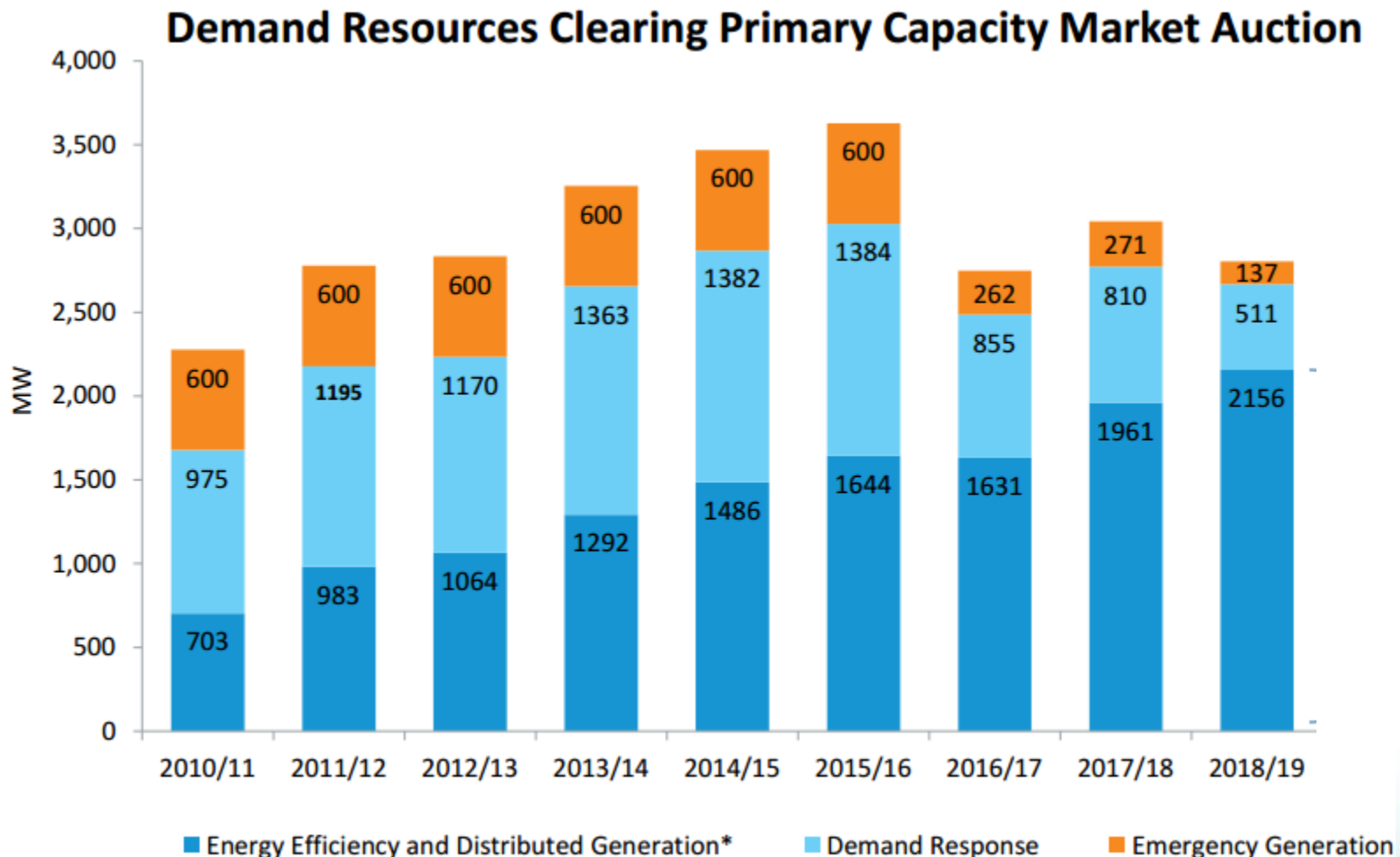
— The forecast minus the impact of EE participating in the Forward Capacity Market (FCM) to date

— The forecast minus anticipated EE growth beyond FCM years

Forward looking program administrators are targeting system peaks on a temporal and locational basis through focus on peak coincident energy efficiency measures, demand response, and geo-targeting.

IDS Policy Drivers:

Declining DR Bids in Wholesale Markets



*DG less than 5% of total Passive DR

Source: Eric Winkler, ACEEE 2015 Intelligent Efficiency Conference

IDSMS in the Northeast and Mid-Atlantic

Overview of Program Strategies

Program	Sector	Details
Manual Curtailment	C&I	- Based upon contractual commitments 50-100kW usage reductions - Reservation v. voluntary enrollment - Opportunity for bonus payments
Direct Load Control (DLC)	Res./ Small C&I	- Based upon direct communication between a program administrator - Smaller usage reductions (~1kW)
Legacy DLC	Res./ Small C&I	- Switch based, one way signal - Cycling an A/C condensing unit, heat pump, pool pump, or hot water heater - Minimum verification required
Two-Way DLC	Res./ Small C&I	Behind the meter information and communication technologies (ICT) transit data over HAN/Broadband
Behavioral Demand Response	Res.	- Based upon customer engagement - Can provide incentive or use behavioral triggers - AMI Required

IDSMS in the Northeast and Mid-Atlantic

Pilots and Plans



Moving beyond switches, toward a proliferation of connected devices

- Smart Phones, T-Stats, Hot Water Heaters, Heat Pumps, EMS, ARTUs, CALCs, PEVs, energy storage, etc.

Program Administrators Offering Demand Response

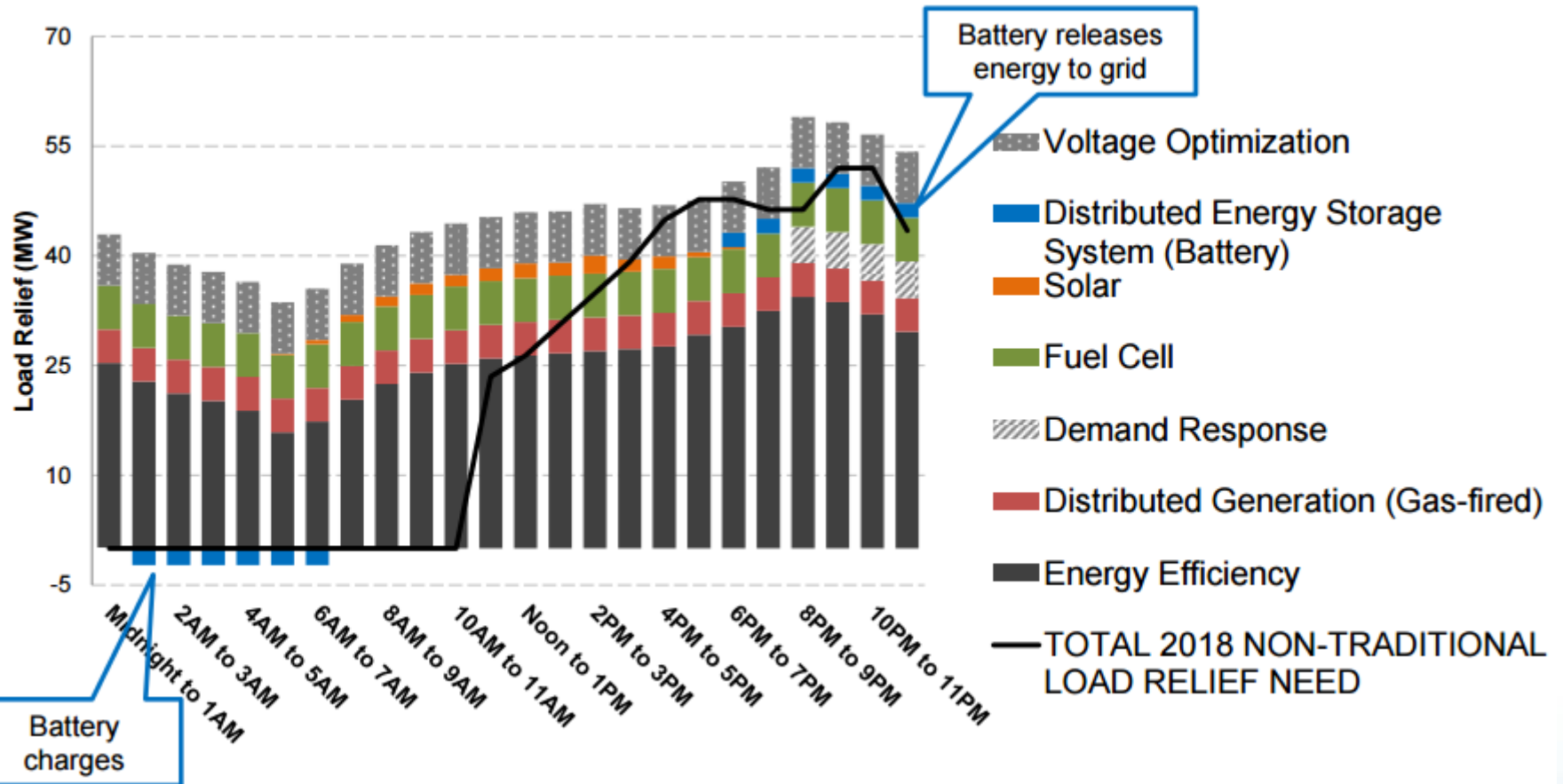
- NWA projects throughout the country
- Mass. 2016-18 Plan
- Conn. 2016-18 C&LM Plan
- Pennsylvania Act 129 Phase III
- NHEC Go Beyond the Peak
- Maryland BGE Smart Energy Rewards
- NY Dynamic Load Management Plans, Smart Home Rate in REV Track II Order



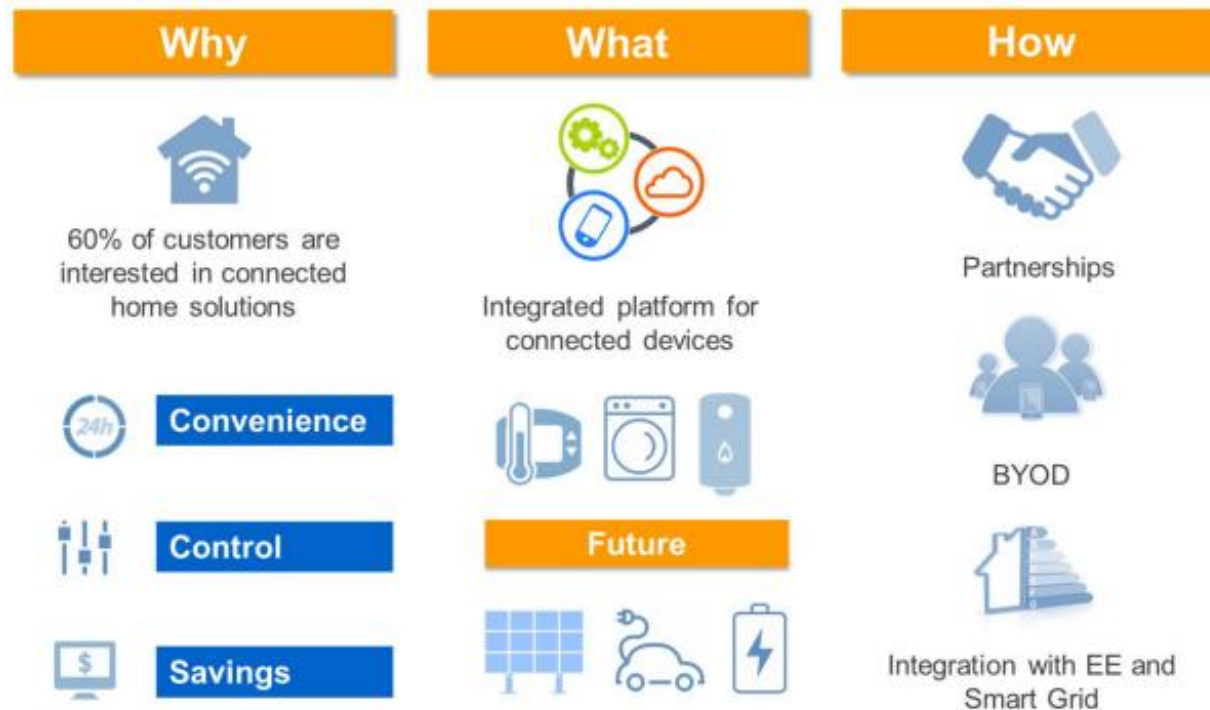
Why should utilities get in the game? Survey Says...

- Those who are enthusiastic about smart tech identify as enthusiastic about EE; 52 percent, v. 27 percent of the general population
- Customers value connectivity almost as much as cost savings
- NGA report outlining opportunities

Integrated Demand Side Management: A Use Case via BQDM



Integrated Demand Side Management Synergies for Energy Efficiency and Demand Response



Source: National Grid

Combined program marketing efforts to save costs and reduce customer confusion

- Bring Your Own Device (BYOD) programs where DR-enabled technology leverages EE incentive
- Identify those who are unenrolled in an event as leads for weatherization efforts

Discussion

Email: BBuckley@neep.org,

Phone: 781-860-9177 x152

NORTHEAST ENERGY EFFICIENCY PARTNERSHIPS

91 Hartwell Avenue, Lexington, MA 02421

www.neep.org