Quantifying the Air Quality Benefits of Energy Efficiency; Massachusetts Case Study

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Project Goals

- Help pave the way for integrating energy efficiency (EE) and renewable energy (RE) into air quality planning through real-world examples
- Road-test EPA's Roadmap for Incorporating EE/RE Policies and Programs into State and Tribal Implementation Plans
  - Inform future efforts to use the Roadmap
  - Identify issues and work with EPA to improve the Roadmap

MassDEP

Massachusetts' Goals

- Massachusetts is testing the baseline pathway for our EE programs:
  - Demonstrate benefit of significant & ongoing EE programs
  - Apply recent experience working with ISO-NE and RGGI states on load and EE forecasting
- Retain Massachusetts EE programs, ranked first in nation for 2011 and 2012

ACEEE American Council for an Energy-Efficient Economy

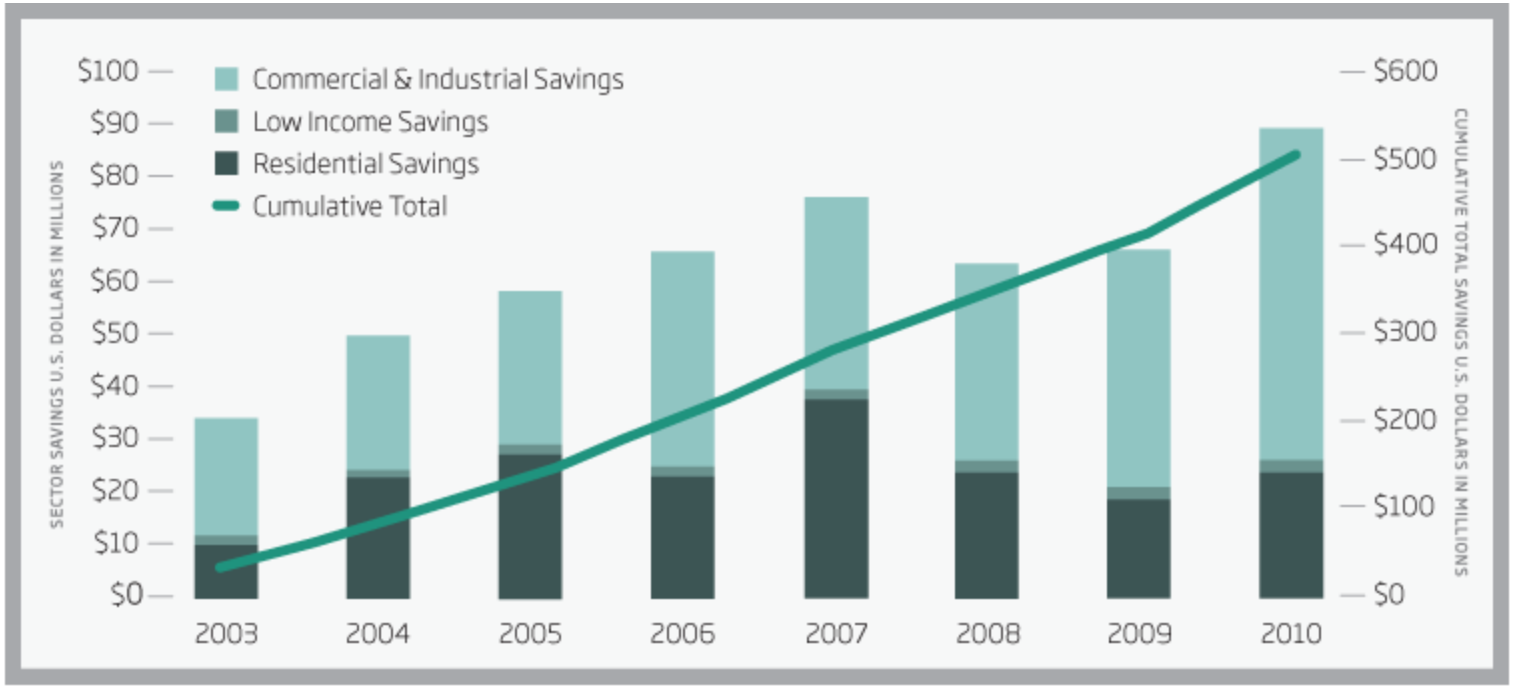
- No imminent SIP, but strong interest in promoting EE programs, encouraging other states to realize EE savings and emissions reductions, and use consistent quantification methods

MassDEP

Massachusetts EE Policy Drivers

- Massachusetts Global Warming Act (2008) requires GHG reductions of 25% by 2020 and 80% by 2050 (compared to 1990 baseline)
- Green Communities Act (2008) requires “acquisition of all available energy efficiency and demand reduction resources that are cost effective or less expensive than supply” and targets RGGI auction proceeds for EE
- Massachusetts Clean Energy and Climate Plan for 2020 relies on EE for largest segment of reductions (nearly one third of 25% reduction)

EE Savings in MA



SOURCE: DOER Energy Data

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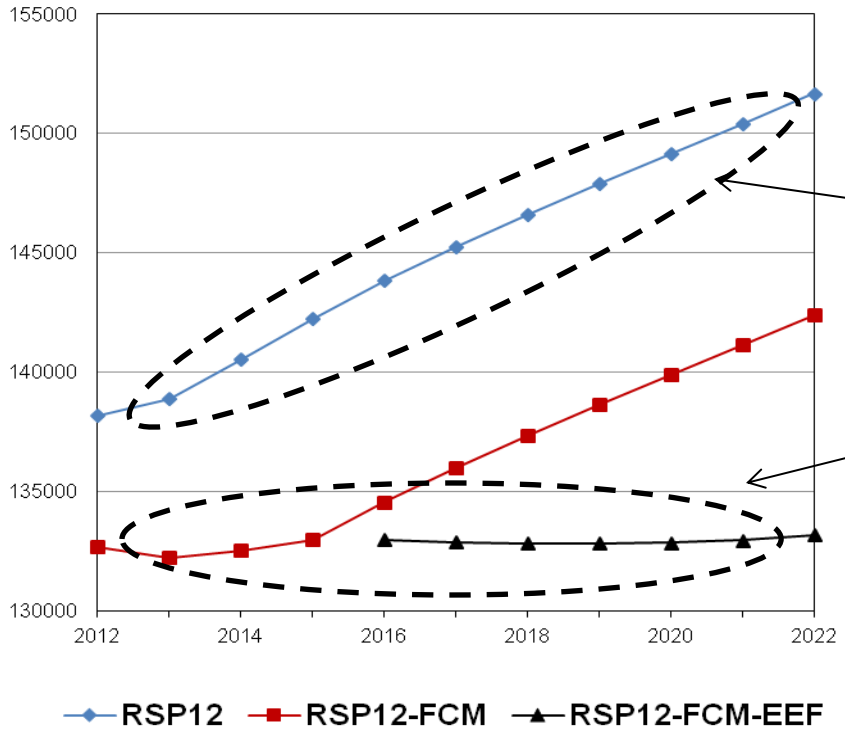
ISO-NE Draft Load Forecast

New England: Annual Energy (GWh)



without state EE investments

with projected state EE investments fully included

Source: ISO-NE Draft 2013 EE Forecast, as presented 2/15/13. The red line includes only EE reflected in the three-year-ahead forward capacity market.

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EPA Roadmap: MA Perspective

- Encouraged by EPA support for inclusion of EE in SIPs
  - EE very cost effective compared to traditional controls (overall costs are often negative)
  - Opportunities for additional reductions from traditional controls may decrease (or not be available for GHGs)
- Concerned about perception of scope of EE investments on individual power plants
  - Policies target power sector as a whole, not individual plants (and reduce multiple pollutants)
  - “Traditional” treatment of mobile and area sources may be a useful model

Questions/Comments?

Thank you!

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