

Energy Efficiency Delivery Strategies

PEPDEE Conference

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Conservation Services Group



Conservation Services Group (CSG)

- Founded in 1984
- No capital-100% bootstrapped
- Nonprofit corporation
- ~800 staff responsible for 7,000+ field jobs nationwide
- Over 2 million homes and facilities served
- Manage the delivery of over \$250 million in energy efficiency and renewable energy investments and projects annually

2006 ISO-NE Forward Capacity Market

Demand Resources

Active

- Demand Response
- Emergency DG

Passive

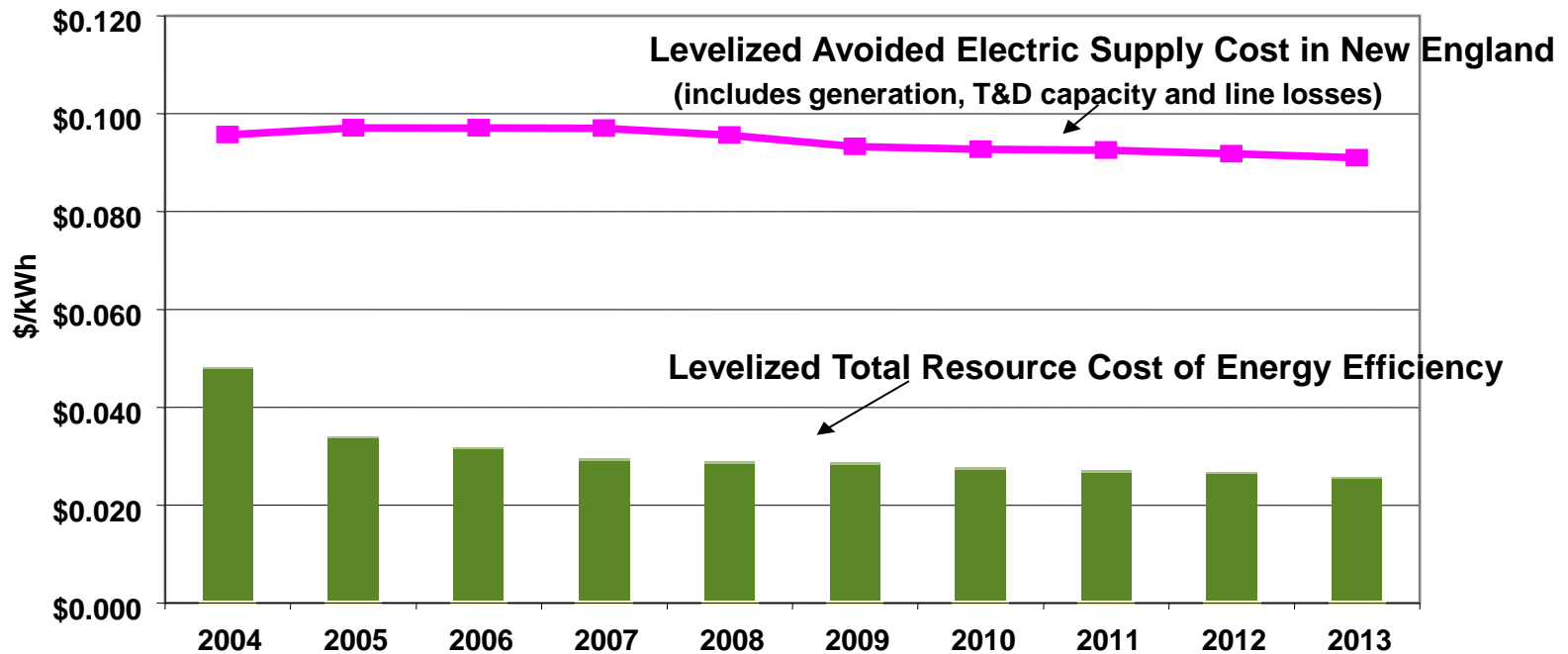
- Energy Efficiency
- DG

Policies Unlock the Potential

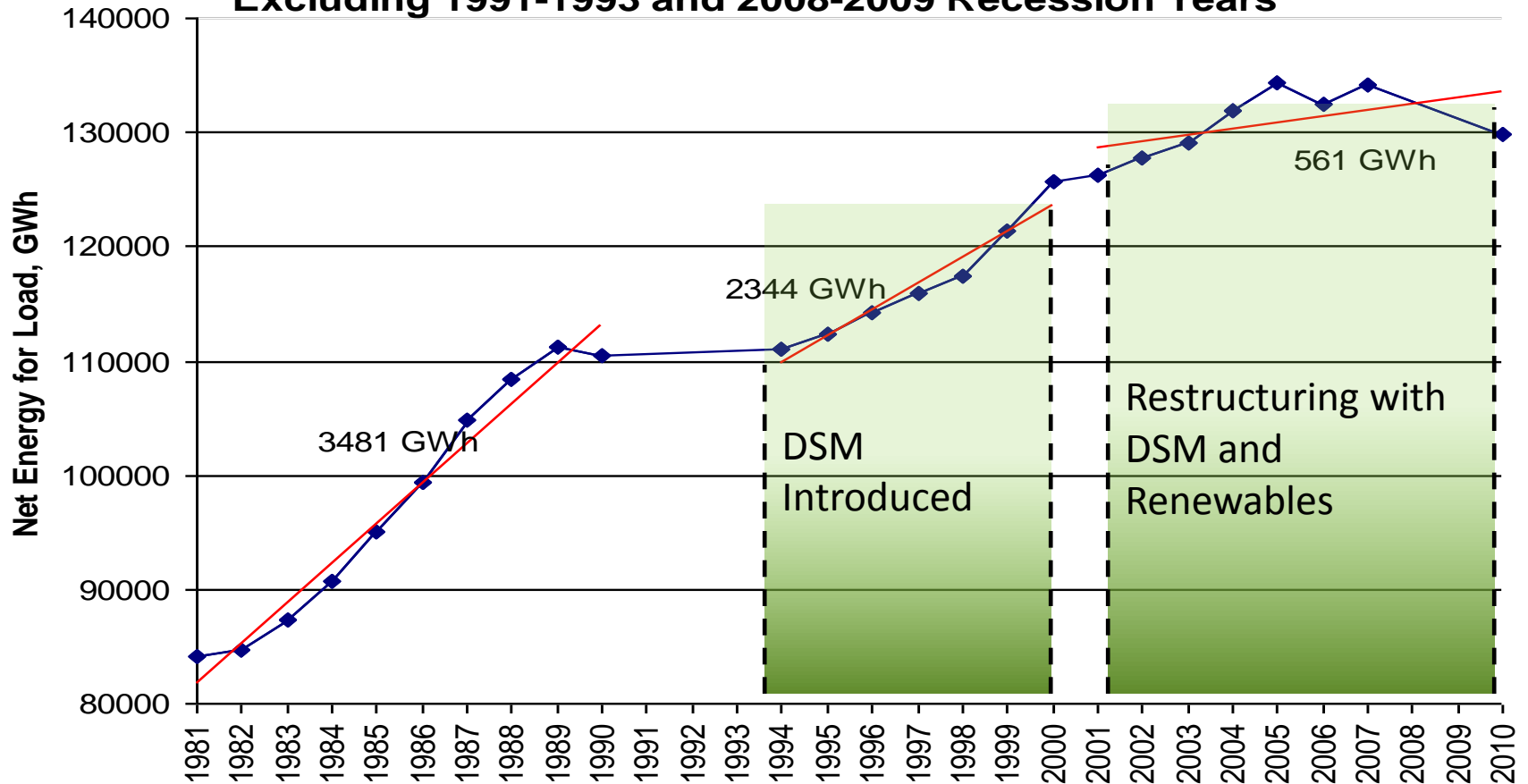
- Decoupling/Incentives
- FERC: Capacity Market Reforms (ISO-NE)
- Efficiency Utility legislation (Vt; DC)
- Legislation/Regulation at State Level
 - Example: Massachusetts Green Communities Act (2008)/Connecticut (2011)
 - “All Cost-Effective Efficiency”
 - Energy Efficiency Portfolio Standard

2005 Cost Comparison

Energy Efficiency is 67% Cheaper Than Supply



New England Weather Normal Net Energy for Load, 1981-2010, Excluding 1991-1993 and 2008-2009 Recession Years



Forward Capacity Market: New England

- First auction completed (in 2008) for 2010
- 2/3 of new resources cleared were Demand Resources
- Anticipated cost of FCM dropped from \$3B to 1B
- Projection that new resources will exceed ICR unless there are significant delistings
 - (recent news: delistings may be planned for several large facilities)

Programs Deliver the Savings

- Key program attributes for success:
 - Technology Stack
 - Incentives
 - Financing
 - Marketing/Customer Engagement
 - Opportunity Assessment (energy audit)
 - Trade Ally engagement
 - Quality Assurance/Standards
 - Data Management/EM & V

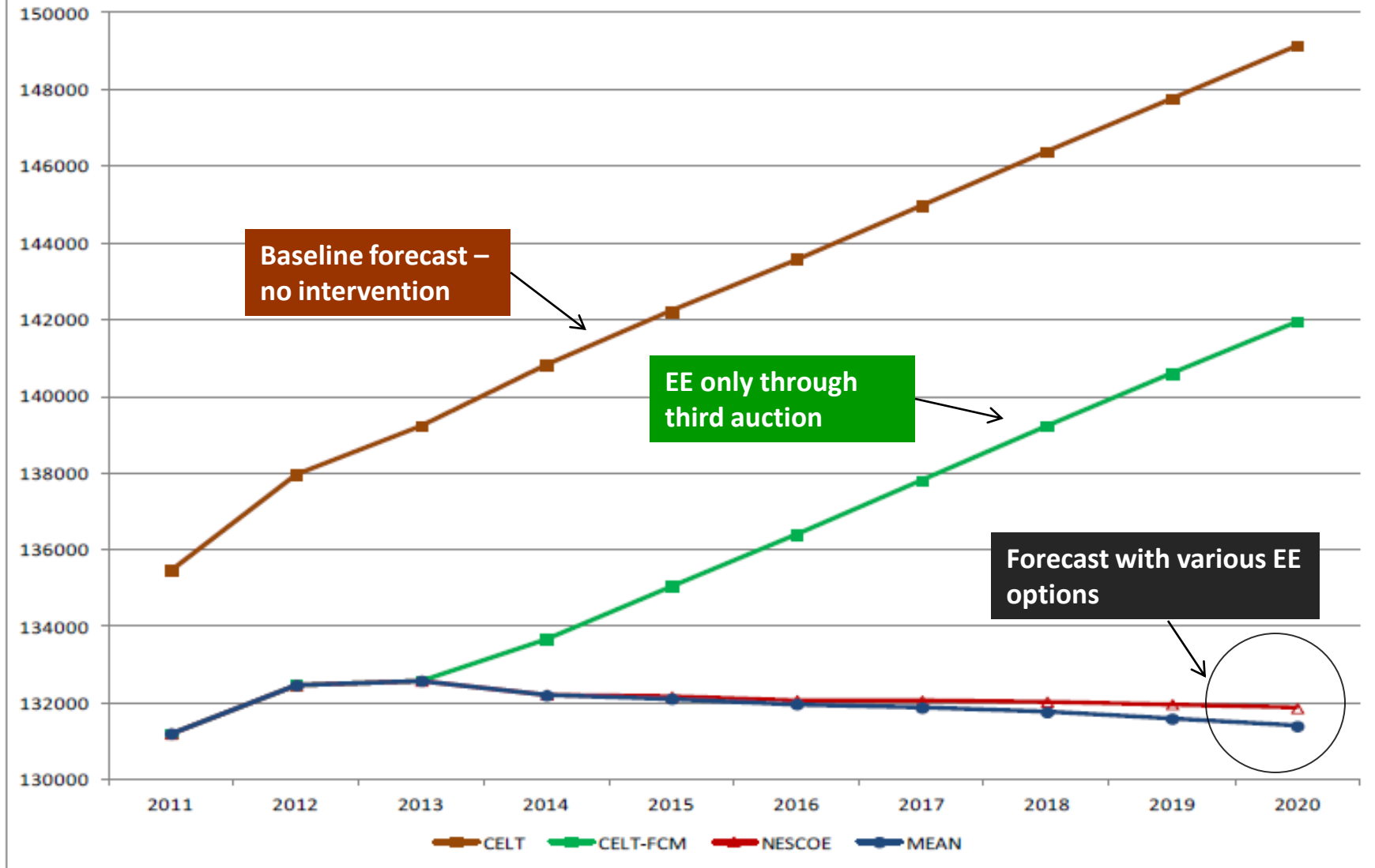
ISO-NE Forecast of NE EE Spending Released last week

2010 (actual):	\$499,665,000
2015 (projection):	\$792,000,000
2018 (projection):	\$811,000,000

These are very conservative estimates.

**Projected to meet all of the Region's
new energy and peak needs.**

ISO-NE RSP11 Energy Forecast & Energy Efficiency Scenarios (GWh)



Program Delivery Innovation

Technology Stack: LED lighting; integration of DR + EE + Renewables; Smart Appliances; Advanced Air and Duct leakage control

Incentives: Layered incentives based on savings or work scope

Financing: On-Bill (NY/Oregon); Local Banks/HEAT Loan (\$50M per year in Mass); WHEEL-Secondary Market (need alternative to Fannie Mae)

Program Delivery Innovation

Marketing/Customer Engagement:

Usage and Demographic targeting; Behavioral based; Competitions and Rewards; Social Media; Continuous feedback and engagement; community engagement; trade ally marketing

Opportunity Assessment (energy audit): Use of IR Scanning; Integration of web based and field based analysis; standards and certification for tools and users

Program Delivery Innovation

Trade Ally engagement: Encourage trade organization (Efficiency First example); certification and accreditation

Quality Assurance/Standards: BPI, NAESCO and continuous improvement; Continuous QA and feedback-published scoring (Maine results)

Data Management/EM & V: Use smart meters and web engagement for real time M & V

What Needs to Change

- **Cost Effectiveness Tests:**
 - misused and out of date
 - consistency and best practice
- **Net to Gross calculations:**
 - wildly unpredictable and unreliable
- **Utility incentives for Demand Resources**
 - need review compared to transmission/distribution

Thank you!

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