



Energy Efficiency: the U.S. Outlook

Sara Hayes, Senior Researcher

American Council for an Energy-Efficient Economy

Presented at the ANSI Energy Efficiency Standards Panel

April 25, 2012

The American Council for an Energy-Efficient Economy (ACEEE)

Nonprofit 501(c)(3) dedicated to advancing energy efficiency through research and dissemination.

- Established in 1980
- Focus on end-use efficiency in industrial, buildings, utilities, and transportation sectors
- State & national policy development, economic analysis, & behavioral programming
- Funding sources:
 - Foundations (34%)
 - Federal & State Grants (7%)
 - Specific Contract work (21%)
 - Conferences and Publications (34%)
 - Contributions and Other (4%)

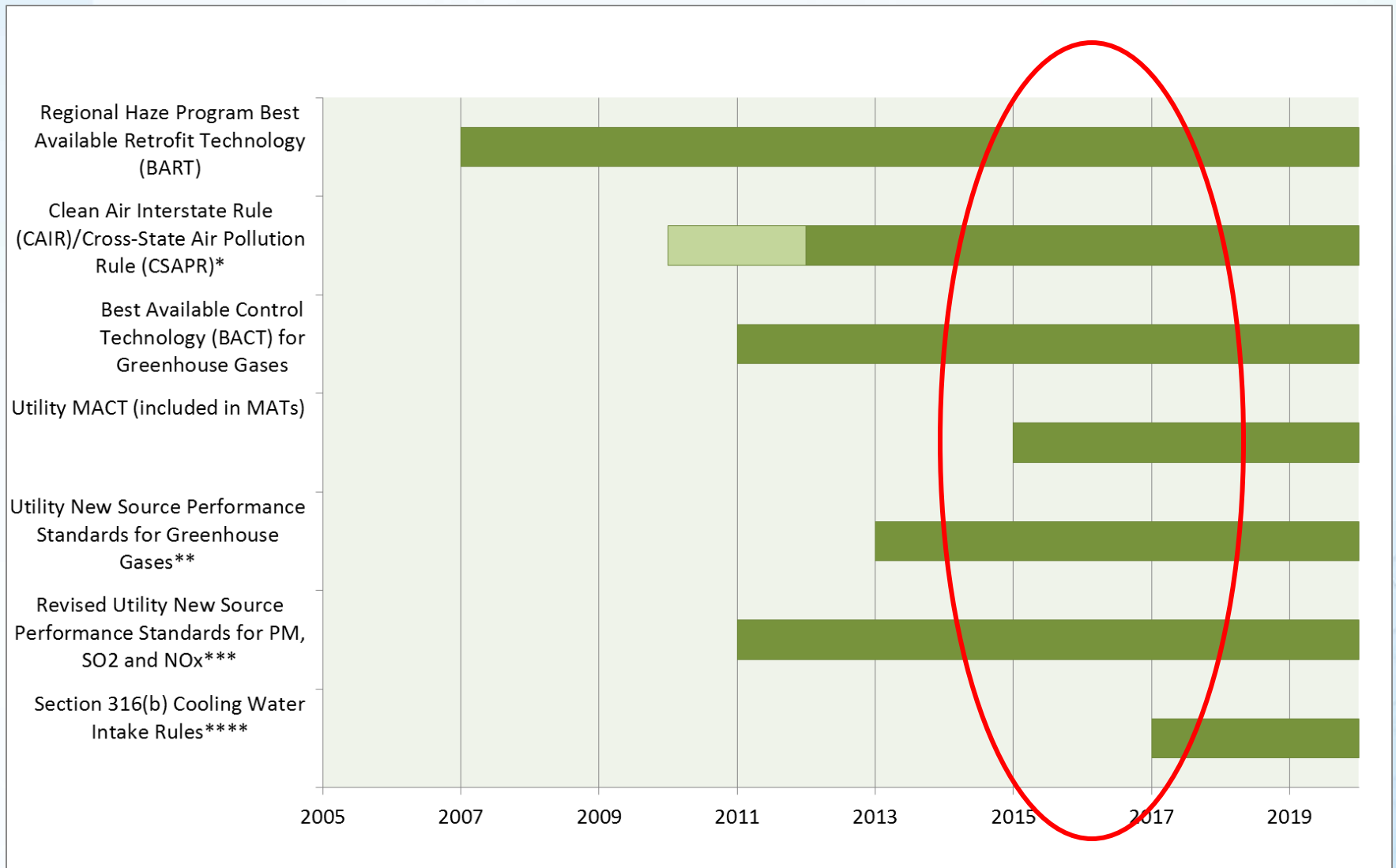


Situational Assessment of U.S. Electricity Market

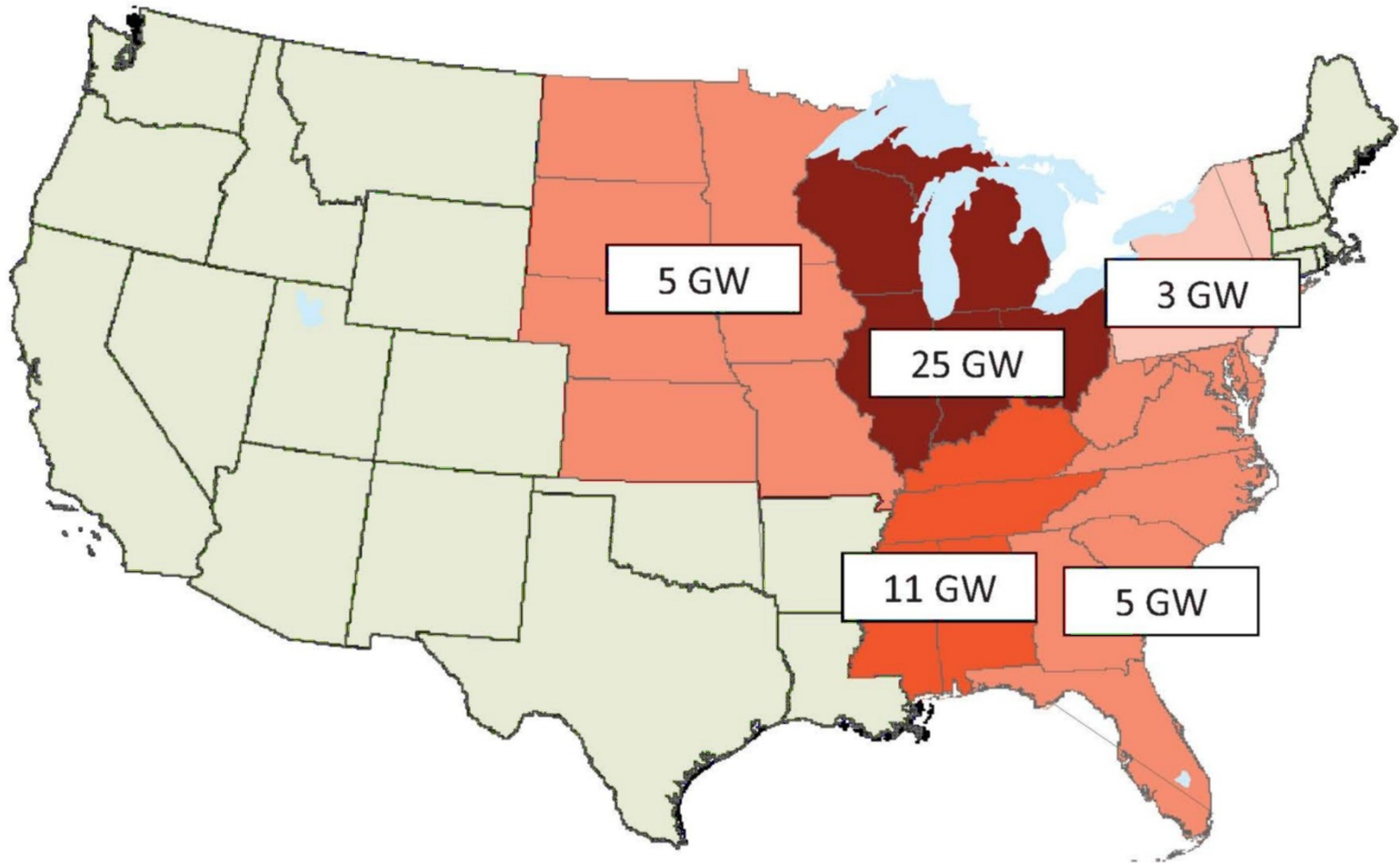
- The U.S. has a fleet of old coal plants operating without emissions controls.
- A suite of near term deadlines will require substantial investment by the electric industry to comply with federal regulations.
- Natural gas prices are forecasted to remain low, which is likely to lead to additional shut-downs.

Challenge: How do we meet our environmental goals while keeping the lights on and energy affordable?

Implementation Timeline of Selected Environmental Regulations



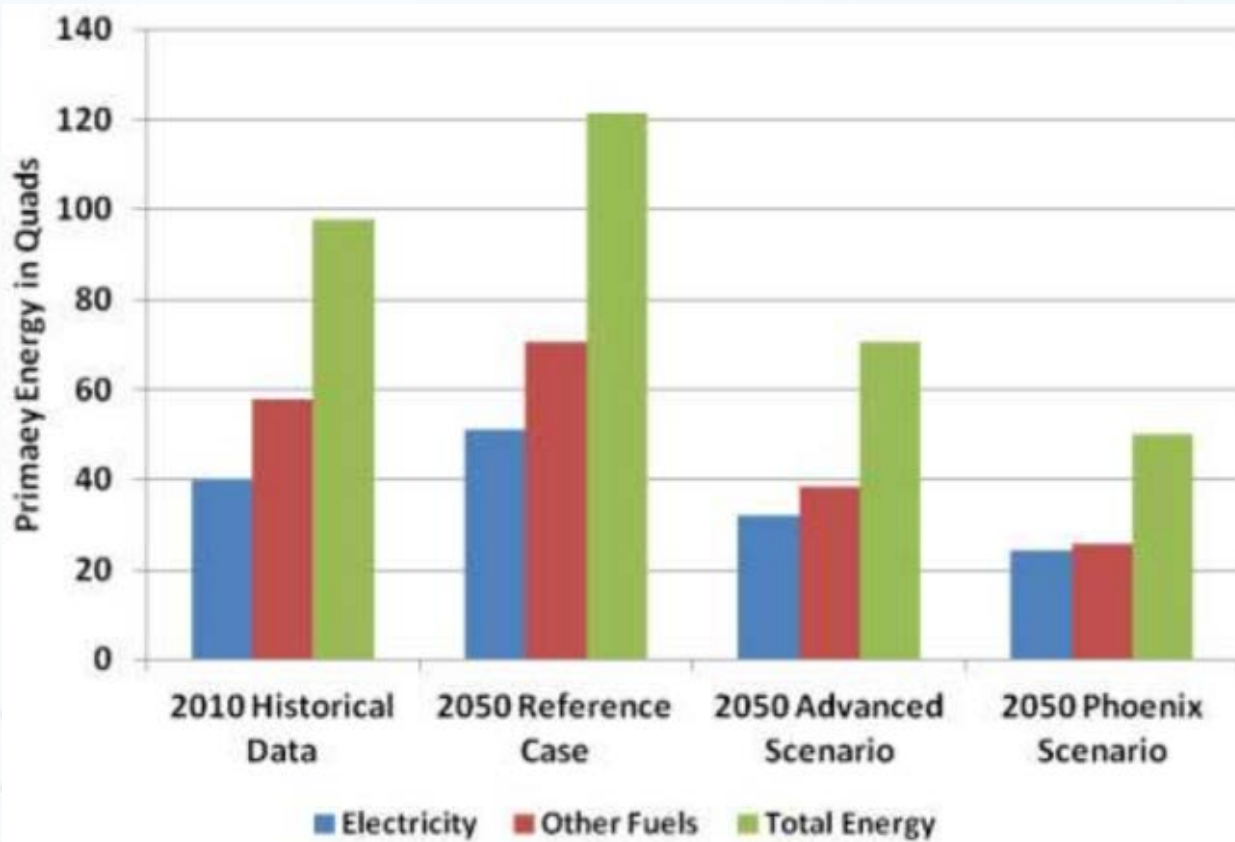
“At Risk” Coal Generation by Region



Why is Energy Efficiency the Right Response?

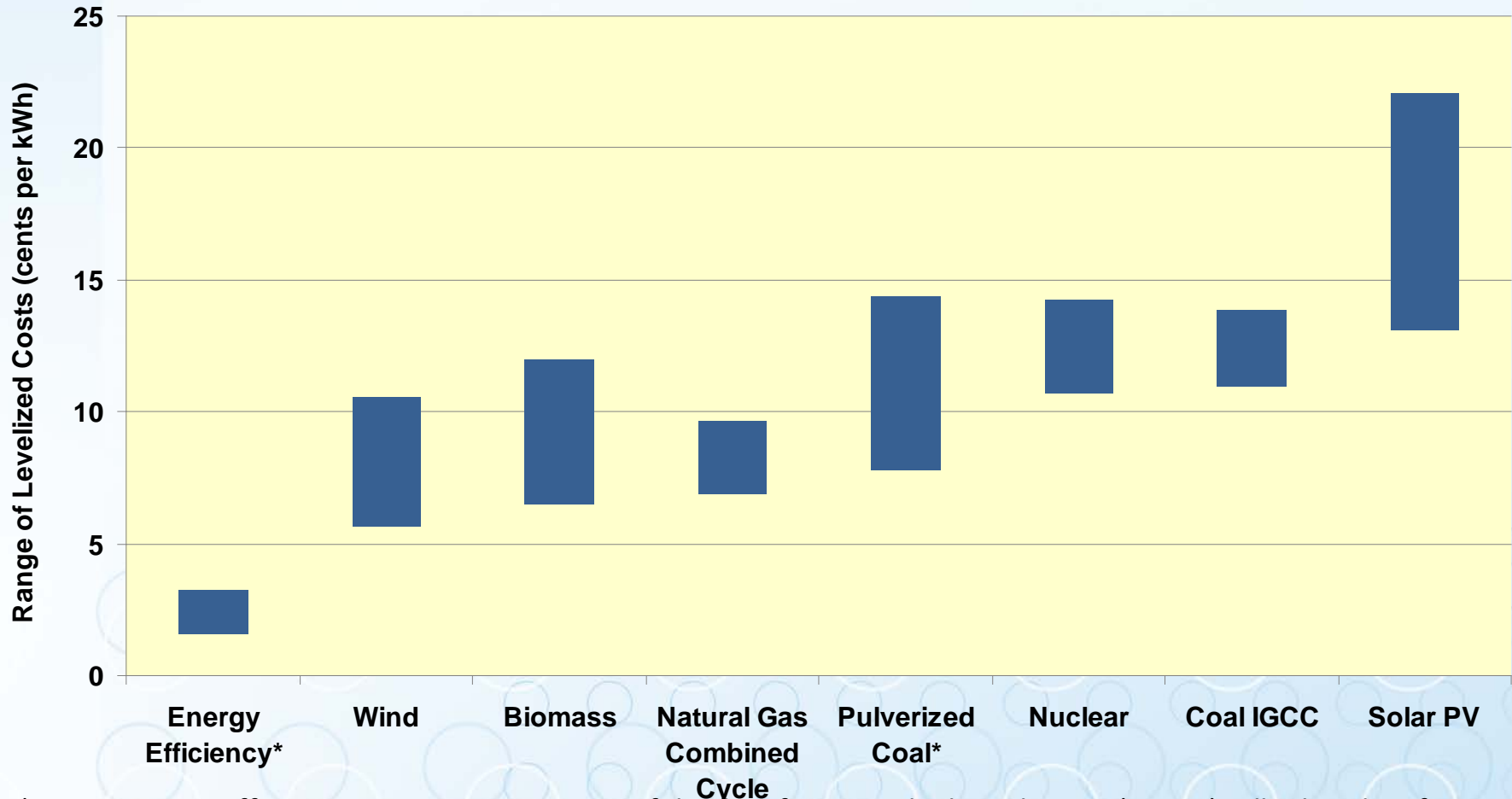
1. There's lots of it.
2. It can be deployed quickly.
3. It's low cost.

Why Energy Efficiency?



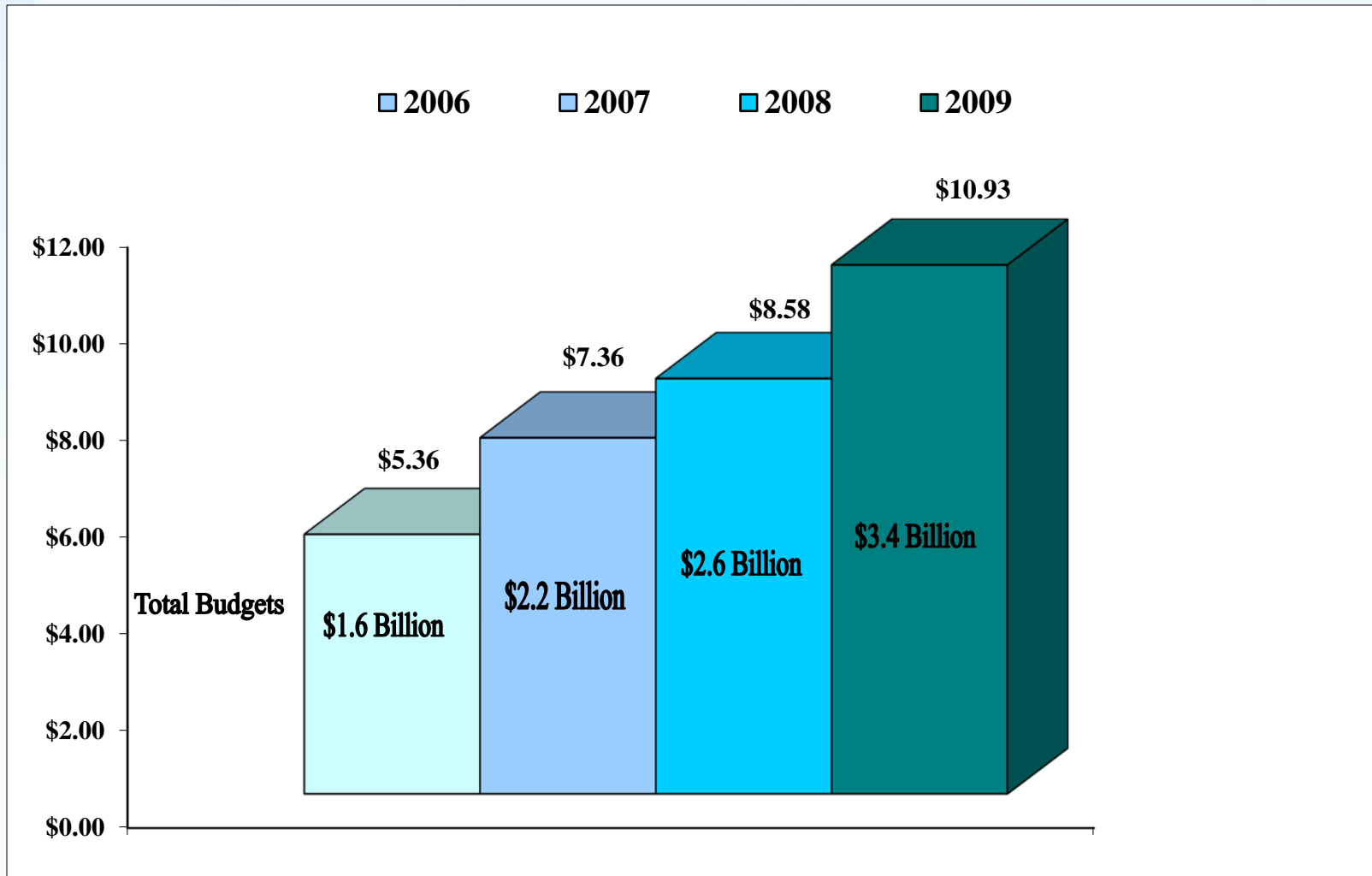
EE investments in existing technologies can save U.S. consumers \$11.6 trillion on energy and reduce energy use by 42% by 2050

Efficiency is the Least-Cost Energy Resource: Levelized Utility Cost of New Electricity Resources



*Notes: Energy efficiency average program portfolio data from Friedrich et al. 2009 (ACEEE); All other data from Lazard 2011. High-end range of advanced pulverized coal includes 90% carbon capture and compression.

National Utility Energy Efficiency Spending



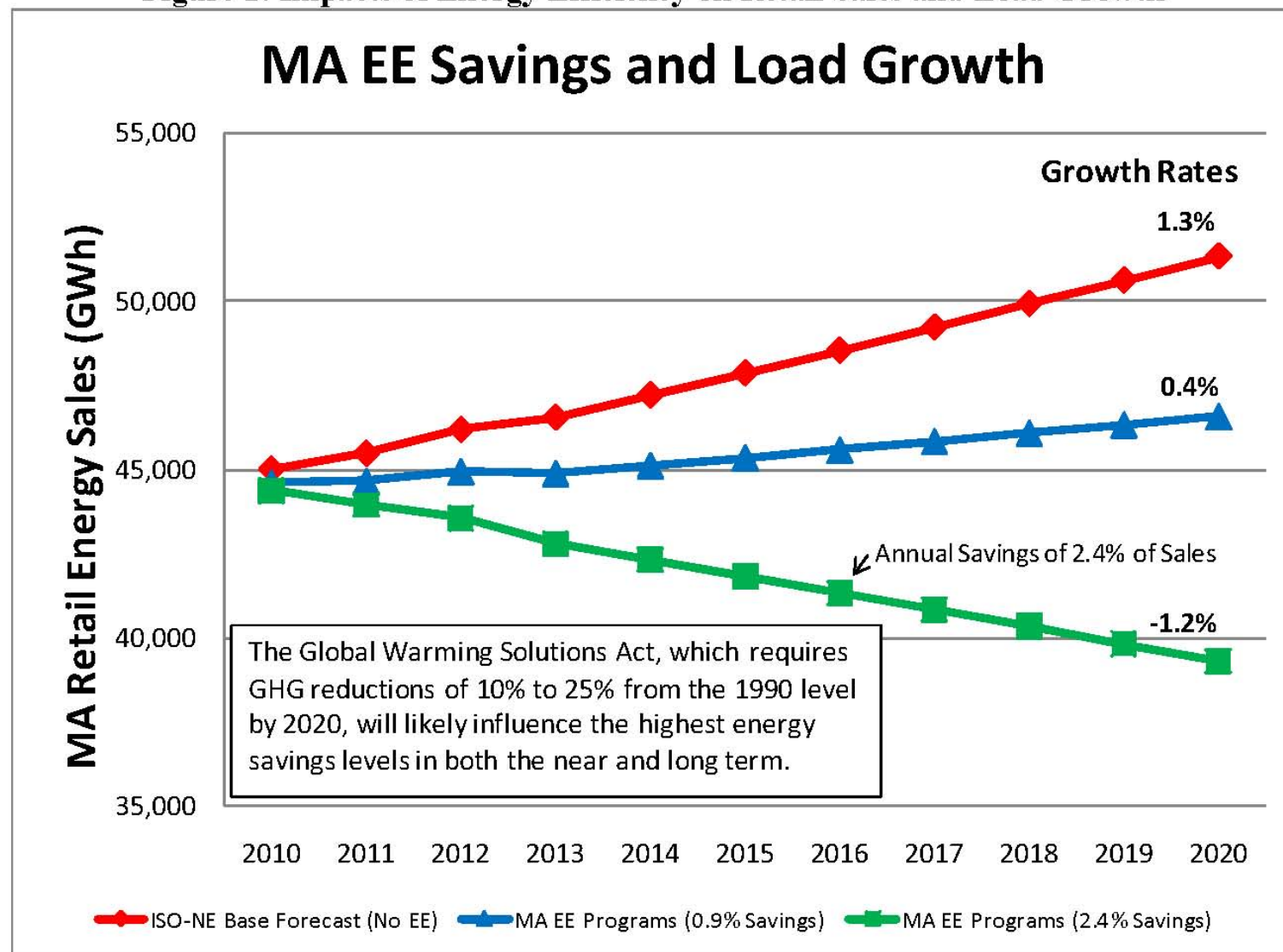
EERS Policy Approaches by State (As of April 2012)

Legend:

- Standard** (Green)
- Combined EERS/RES** (Yellow)
- Voluntary Goal** (Red)

Source: American Council for an Energy-Efficient Economy

Figure 1: Impacts of Energy Efficiency on Retail Sales and Load Growth

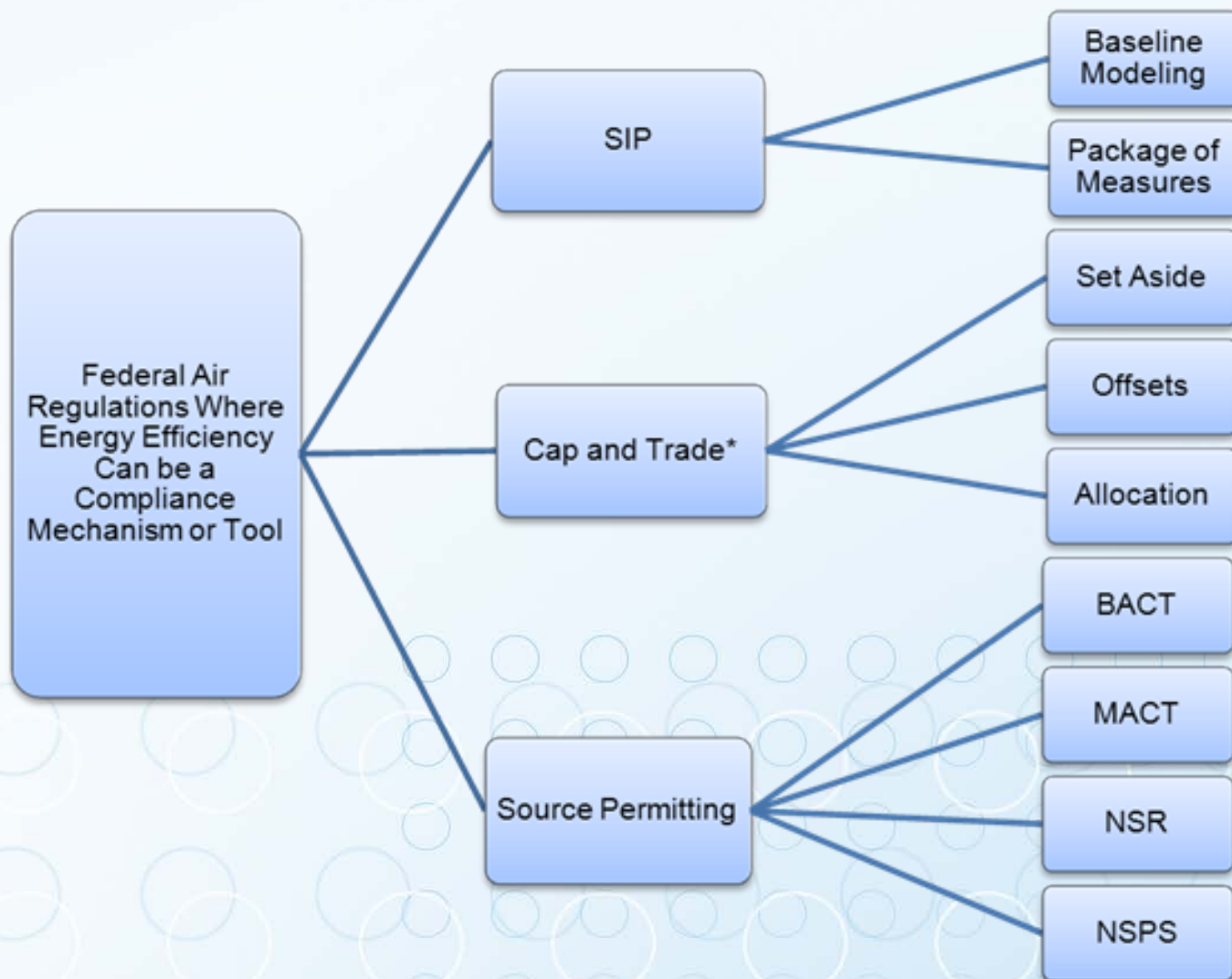


Prepared by the EEAC Consultants based on the ISO-NE forecast, historical data on MA programs, the 2010-2012 plans, and 2.4% annual savings for 2012-2020.

National Opportunities for Energy Efficiency

- A national Energy Efficiency Resource Standard (EERS)
- Clean Energy Standard (CES)
- Implementation of National Consensus Appliance Agreements Act (INCAAA)
 - Political opposition
- Tax Reform
 - EPAct 2005 successfully implemented tax incentives and credits
 - BIG omnibus effort with lots of distractions

Opportunities for Energy Efficiency in EPA Air Regulations



What's Needed?

- Improved information about opportunities
- Improve dialogue and communication between state energy offices, air regulators, and utility regulators.
- Overcome upfront costs
- Align financial incentives
 - Split incentives – distribution of costs & ben
 - Utility business model
- Technical assistance to states to include EE in air quality plans
 - CSAPR, SIPs
- Standard EM&V that works for PUCs AND air regulators.
- Tools that allow aggregation of savings from EE across programs.

In the next decade we will see a significant shift and substantial investment in the electric utility industry.

Conclusion : Energy efficiency is a plentiful, readily deployable, low-cost resource that can ensure we meet our energy and environmental goals.

Questions & Comments

shayes@aceee.org

(202) 507-4747

ACEEE website: www.aceee.org