



U.S. DEPARTMENT OF
ENERGY

Energy Efficiency &
Renewable Energy



2012 NARUC Winter Committee Meetings

Washington, DC

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Office of Energy Efficiency and
Renewable Energy

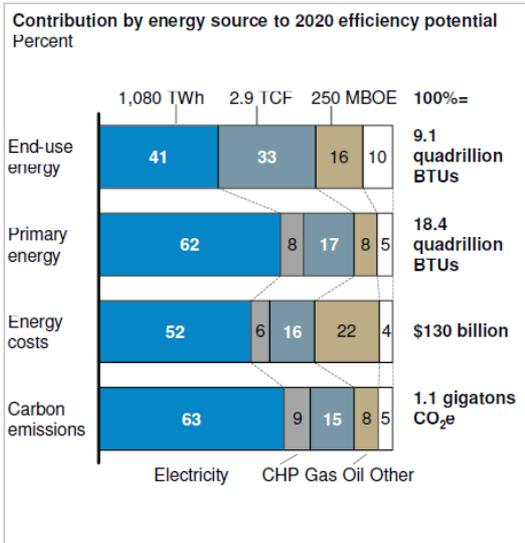
Today

- Significant low cost EE resource
- Post-ARRA
 - Trained workers
 - New state and local expertise
- EPA Rules
 - EE offers lower costs, enhances reliability
- Energy Prices
 - Keep EE competitive
- Many successful EE programs
- SEE Action bringing them forward

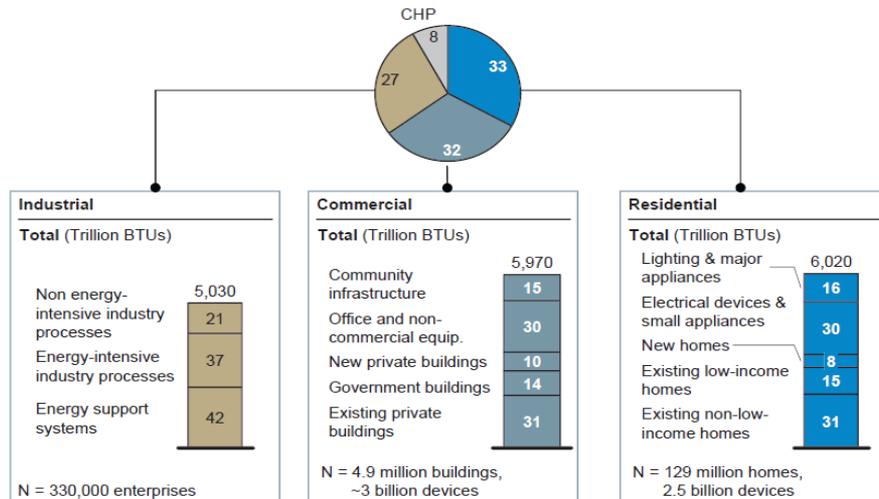
Energy Efficiency

- Homeowner/ Business/ Industrial savings
 - Lower bills
 - Avoided infrastructure over longer-term
- Local job creation / retention
- Environment / public health benefits
- Help mitigate localized reliability concerns

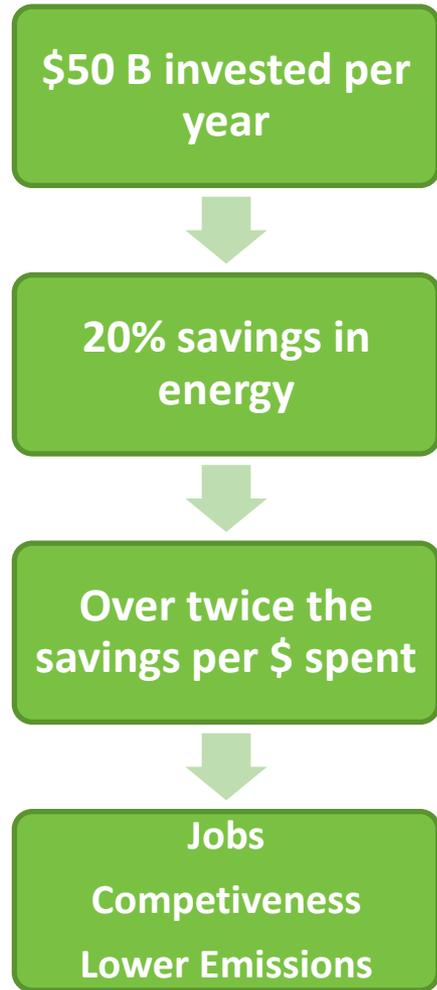
Energy Efficiency Resource



Percent, 100% = 18,410 trillion BTUs of primary energy



Source: EIA AEO 2008, McKinsey analysis

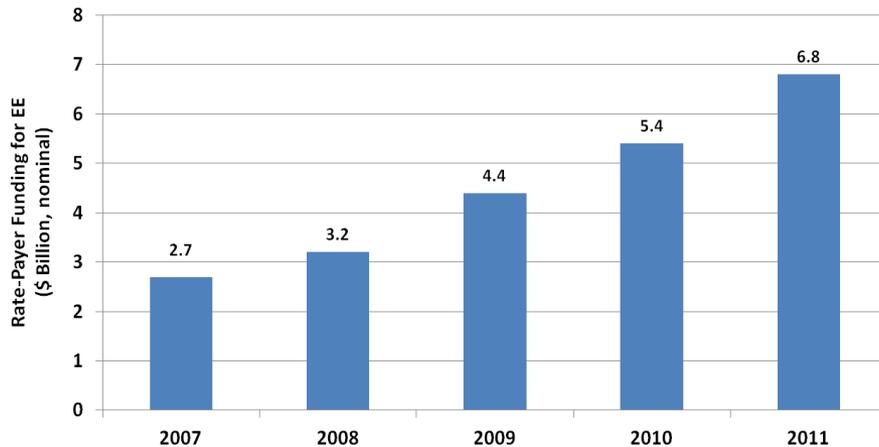


Progress

- Recovery Act
 - **\$12 B** in energy efficiency investments (low income, public buildings)
 - **600 K** low income homes weatherized -- ahead of target
 - **2,300** local governments engaged in projects
- Appliance/equipment programs
 - Standards for almost **30** products since 2009 offering savings of almost **\$400 B** thru 2030
 - More standards in process; goal of 9 thru 2013
- Building codes
 - **Almost 60% of** states have adopted or made significant steps to adopt latest building codes from **10** in 2009
- State energy savings targets
 - About 50% of states; 18 states with targets of 1% annually or more

Progress...and Potential

Electric Efficiency Budgets (2007-2011)

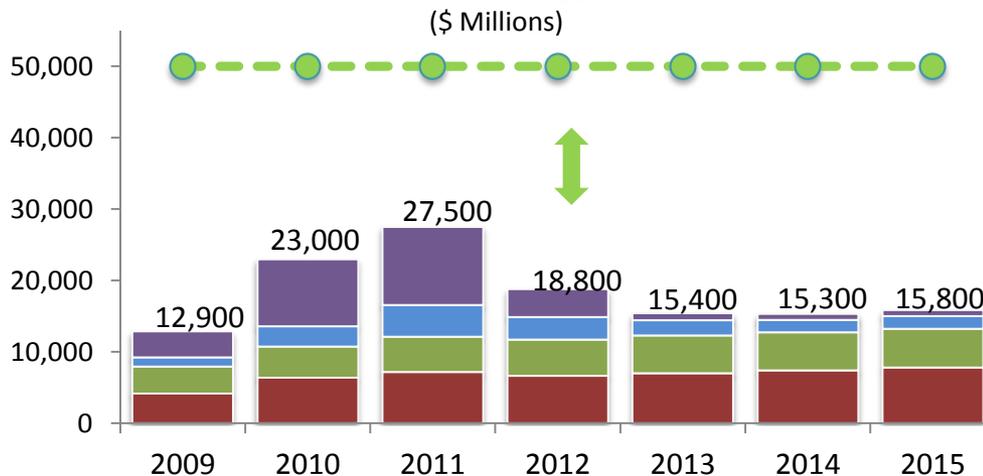


Ratepayer funded investment

- Grown to **\$6.8B**/year in 2010, more than double a few years ago

Source: Summary of Ratepayer-Funded Electric Efficiency Impacts, Budget and Expenditures
CEE, IEE, AGA January 2012

Investments in Energy Efficiency



Ratepayer + private + consumer share + federal

- Well below **\$50B**/year

Federal including ARRA
Consumer Programmatic Share
Utility Ratepayer Programs
Private (ESCO & other)

Source: McKinsey Global Energy and Materials (2009),
Unlocking Energy Efficiency in the U.S. Economy

EPA Utility Mercury and Air Toxics Rule

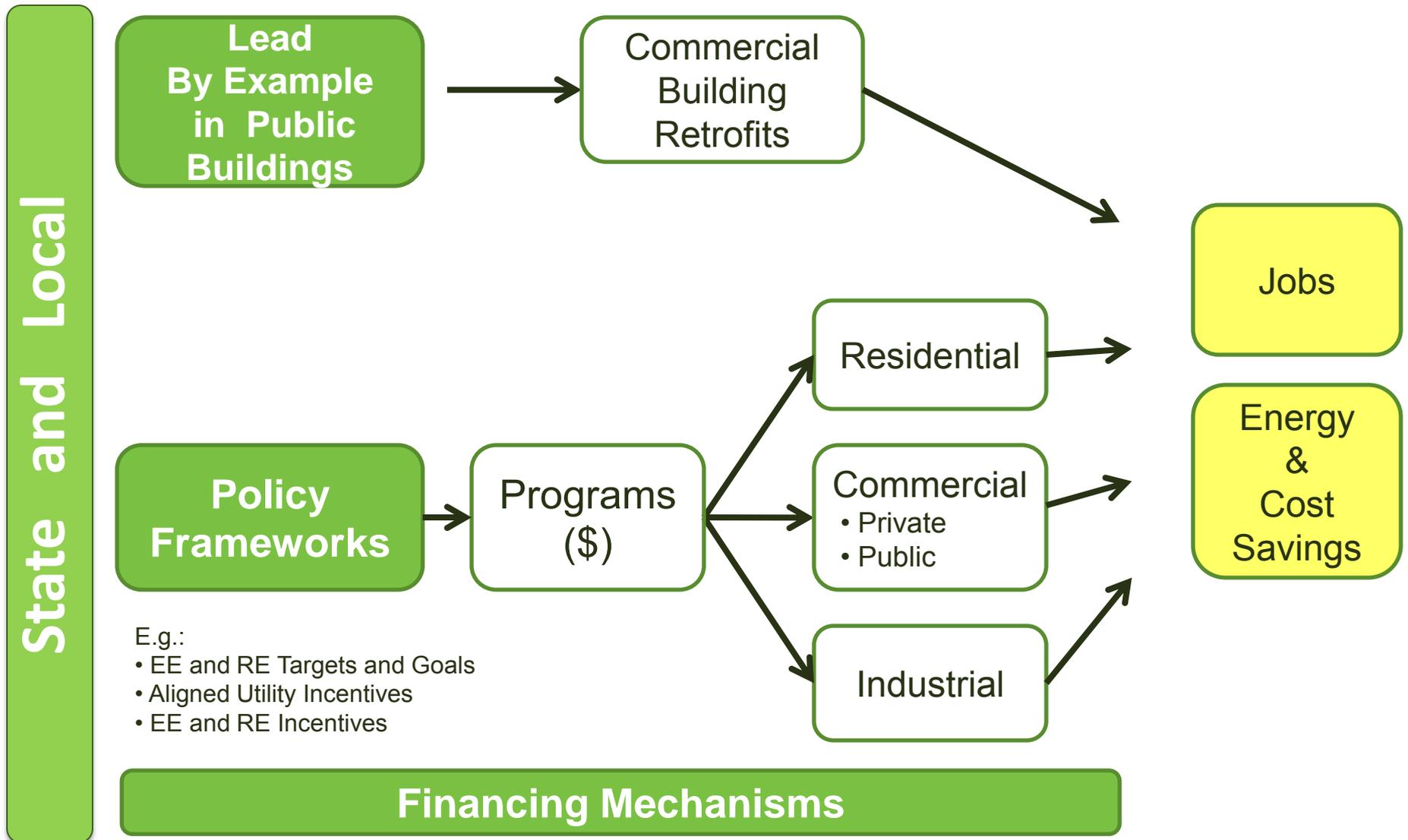
- Finalized December 2011
- Significantly reduces emissions and provides public health benefits
 - Mercury, acid gas, and sulfur dioxide emissions
- Covers ~1,400 coal/oil-fired units at ~600 power plants
 - Up to 4 years for compliance will be "broadly available" for most sources
- Offers range of compliance strategies
- Limited retirements
 - <1/2% national capacity (5 GW in 2020)
 - Special provisions for reliability critical units

EE can reduce costs of compliance by more than 50% by 2020

- From \$10 B to \$4 B
- Based on sensitivity runs and reducing demand by about 5% by 2020

State and local policies and programs play large role in EE savings

State and Local Pathways



DOE Efforts to Address EE Challenges

Using convening power, recognition for excellence; technical expertise , technical assistance to develop consistent approaches, best practices, objective information

- **Results-Oriented Business Models**

- Consumer
- Financial Firms
- Utilities



Better Buildings Challenge

- **Better Information to Engage Consumers**



Building Energy Asset / Upgrade Tools (MPG ratings)

- **Improved Access to Financing**



Best practices (ESPCs, RLFs)

- **Skilled/Trained Workforce**



Workforce guidelines, training, credentials

- **Better evaluation methods**



Uniform Methods Project

- **State and local policies aligned with cost-effective EE**



SEE Action



- **State policy maker led; federally facilitated**
- **Upcoming Resources**
 - **Guide to Data Access and Privacy** -- how and under what circumstances customer energy usage data is provided to third parties for efficiency purposes (*expected March 2012*).
 - **Measuring Savings for Behavior Based Energy Efficiency Programs** -- technically valid methods for estimating the energy savings from behavior-based energy efficiency programs (*expected March 2012*).
 - **Guide to Implementing Model Industrial Efficiency and Combined Heat and Power State Programs and Policies** -- guide on effective CHP programs (*expected September 2012*).
 - **Regulatory Policy Navigation Guide/Game** -- proposed experiential learning tool designed to help regulators navigate the wealth of existing information on available regulatory options to address utilities' financial barriers to adopting energy efficiency programs (*expected June 2012*).
- **DOE Technical Assistance**
 - **DOE SEP Competitive**
 - **DOE/OE Assistance**