



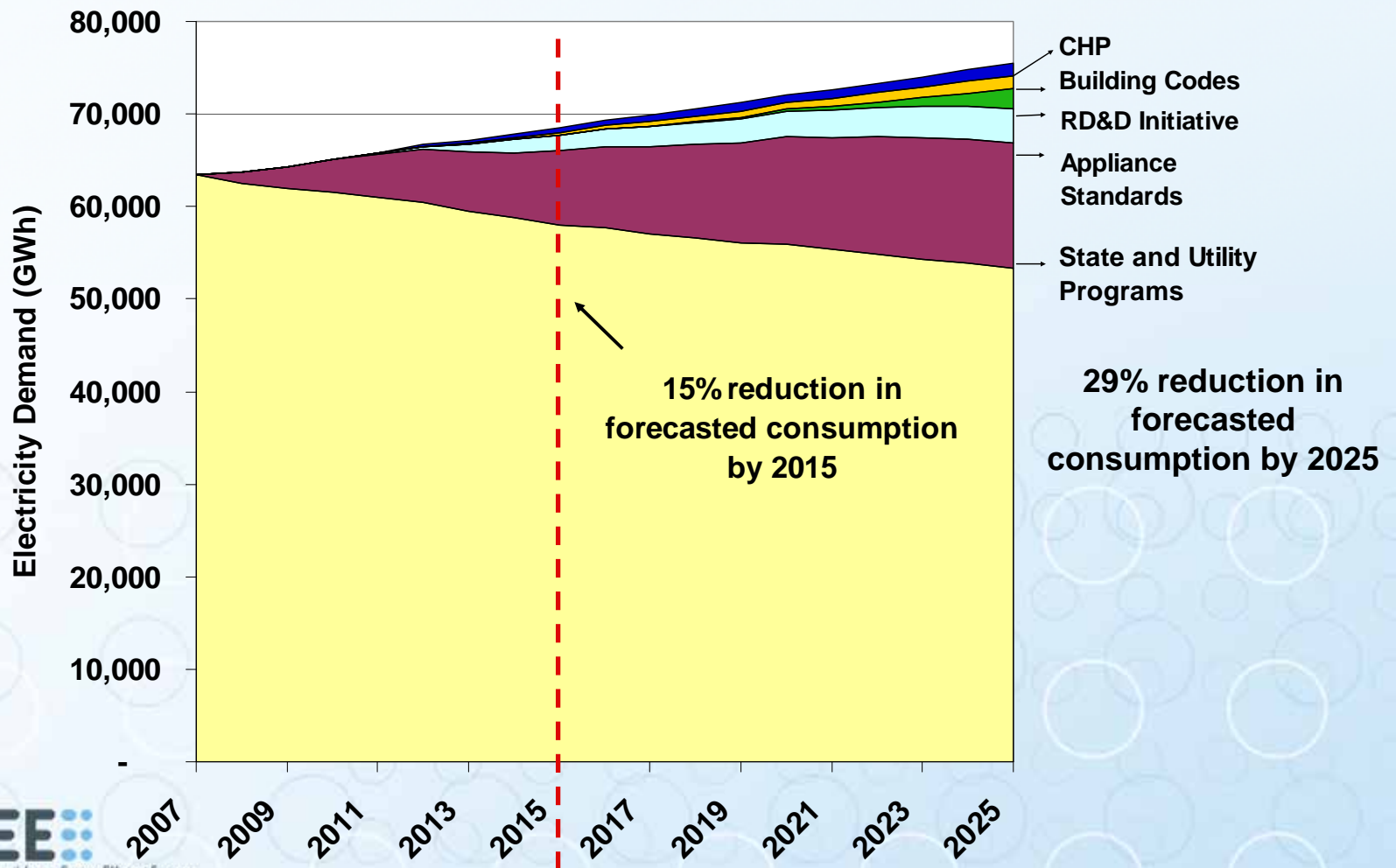
# Energy Efficiency Resource Standards

Steven Nadel

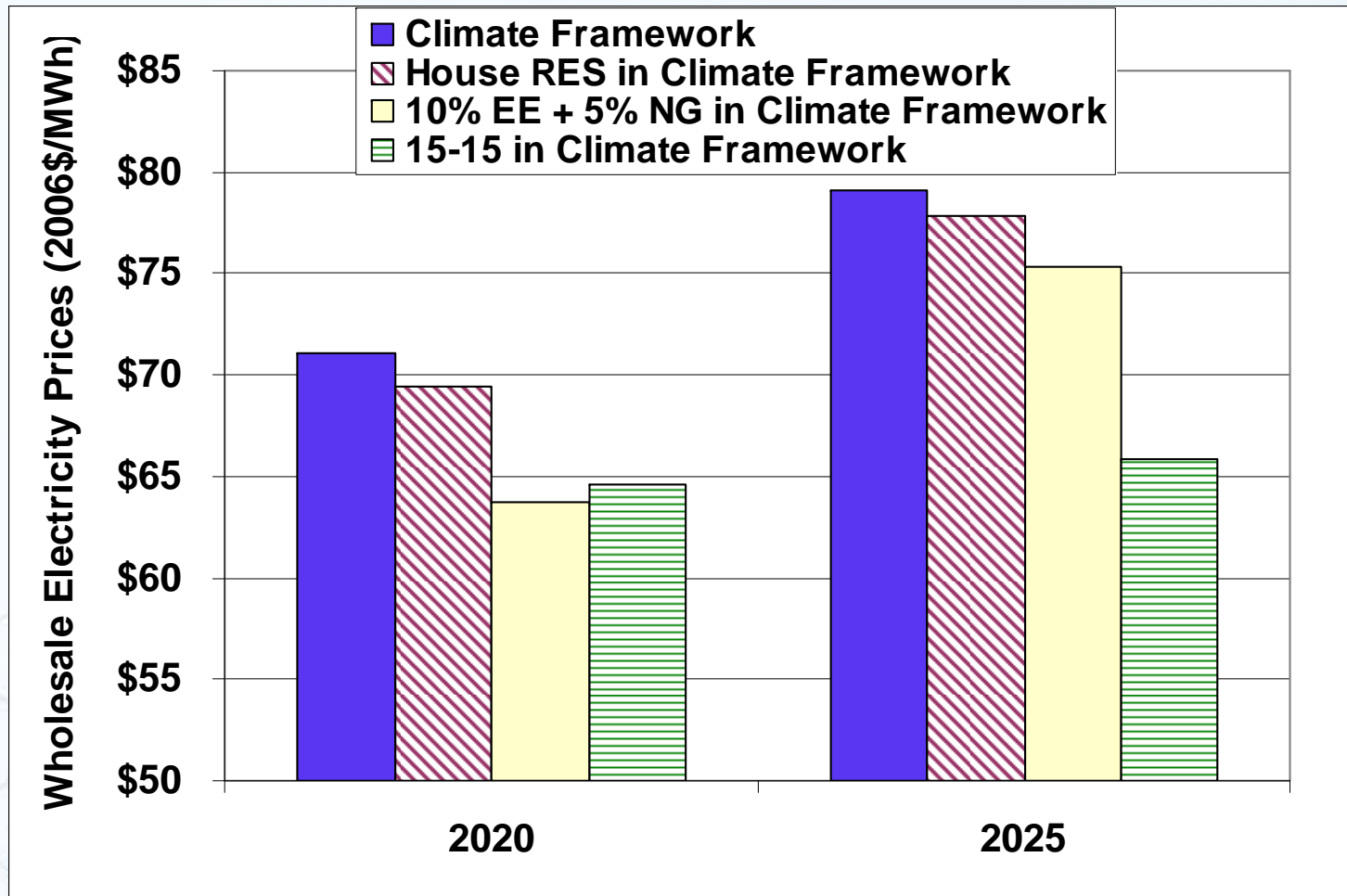
American Council for an Energy-Efficient Economy

Feb. 2009

# Share of Maryland Electricity Sales That Can Be Met by Efficiency Policies



# National Wholesale Electricity Price With an EERS (Climate Framework Scenario)



Note: Cost of efficiency programs will raise prices at retail level modestly.

# Energy Efficiency Resource Standards

Analogous to a Renewable Portfolio Standard  
Electric and/or gas savings targets for utilities

- Includes end-use efficiency and sometimes combined heat & power (CHP) and codes/standards
- Targets generally start low and increase over time

Savings must be documented in accordance with evaluation rules established by regulators

Can authorize bilateral contracts to exchange savings credits and provide a role for 3<sup>rd</sup> parties

# Why an EERS?

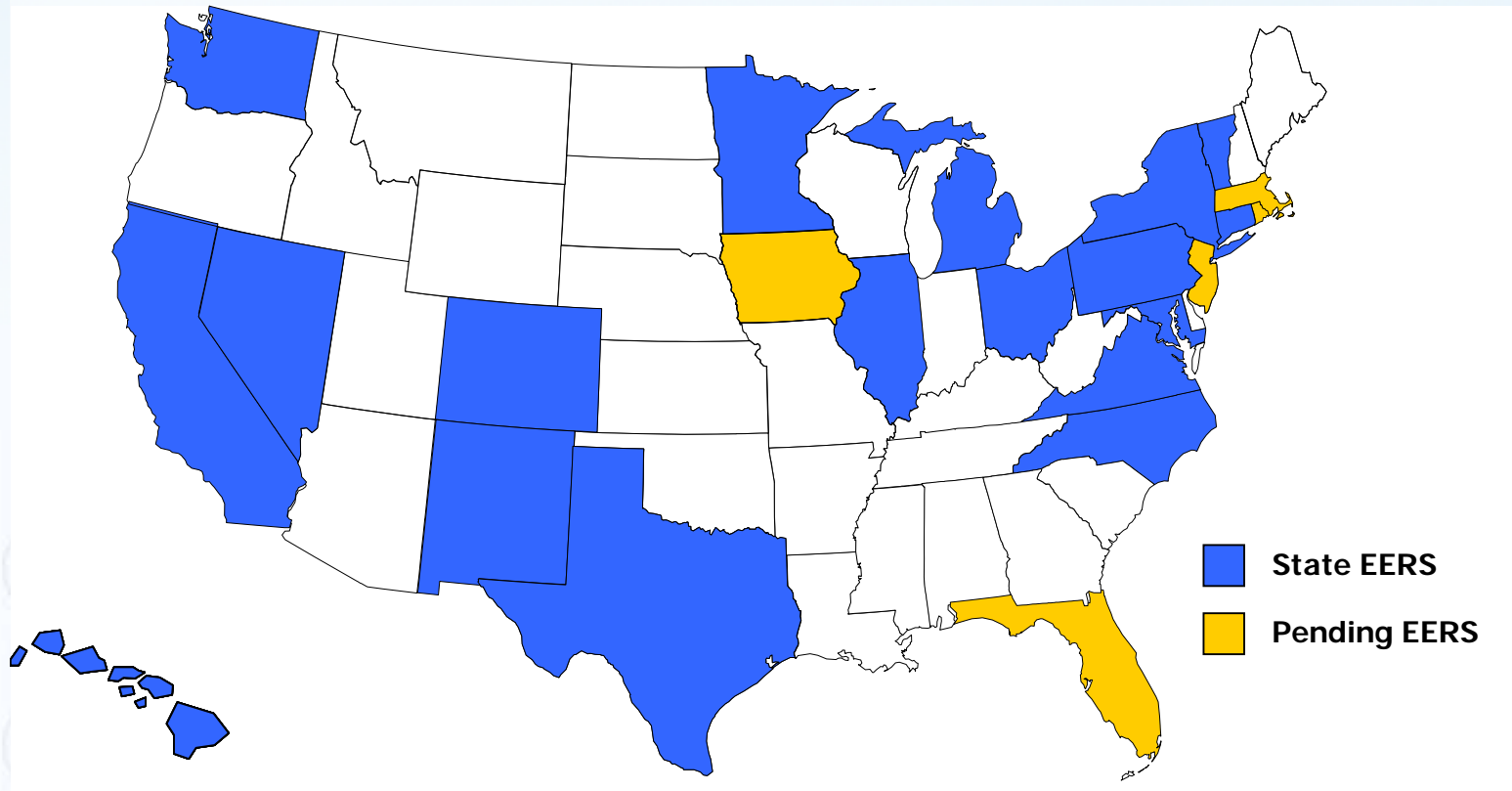
Achieve substantial energy and emissions savings

Performance based – emphasizes savings, not spending

Can be easier to legislate savings targets than spending amounts

Can start programs quickly, without many years of study (but targets should be based on cost-effective opportunities)

# States with Energy Efficiency Resource Standards (EERS)



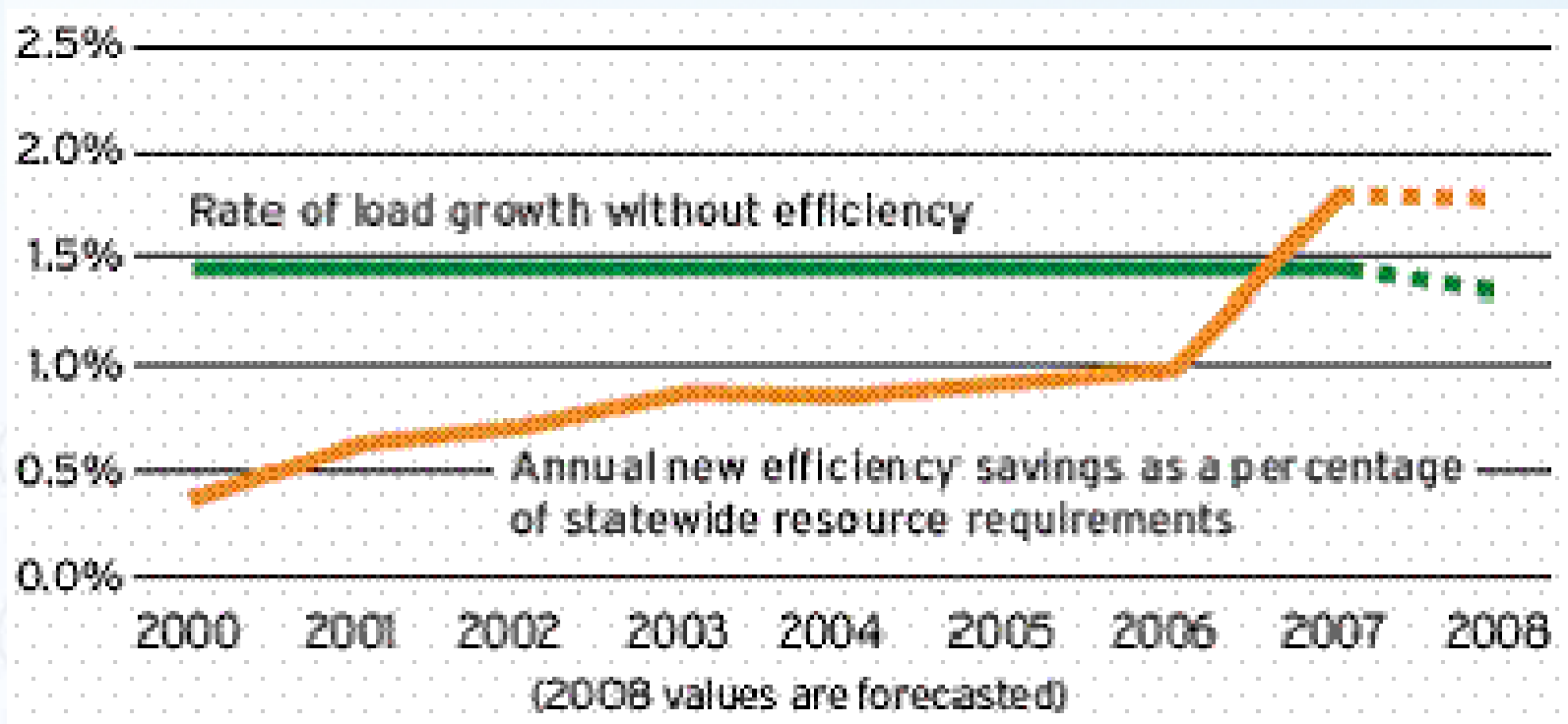
These plus BAU EE will save ~6% nationally by 2020

# Texas

- First state to establish an EERS
- Initially 10% of load growth but increased by legislature to 20% of load growth
- Utilities have not had difficulty meeting and exceeding targets
- In 2009, bill likely to come up to increase to 30% or even 50% of load growth or the equivalent as % of sales

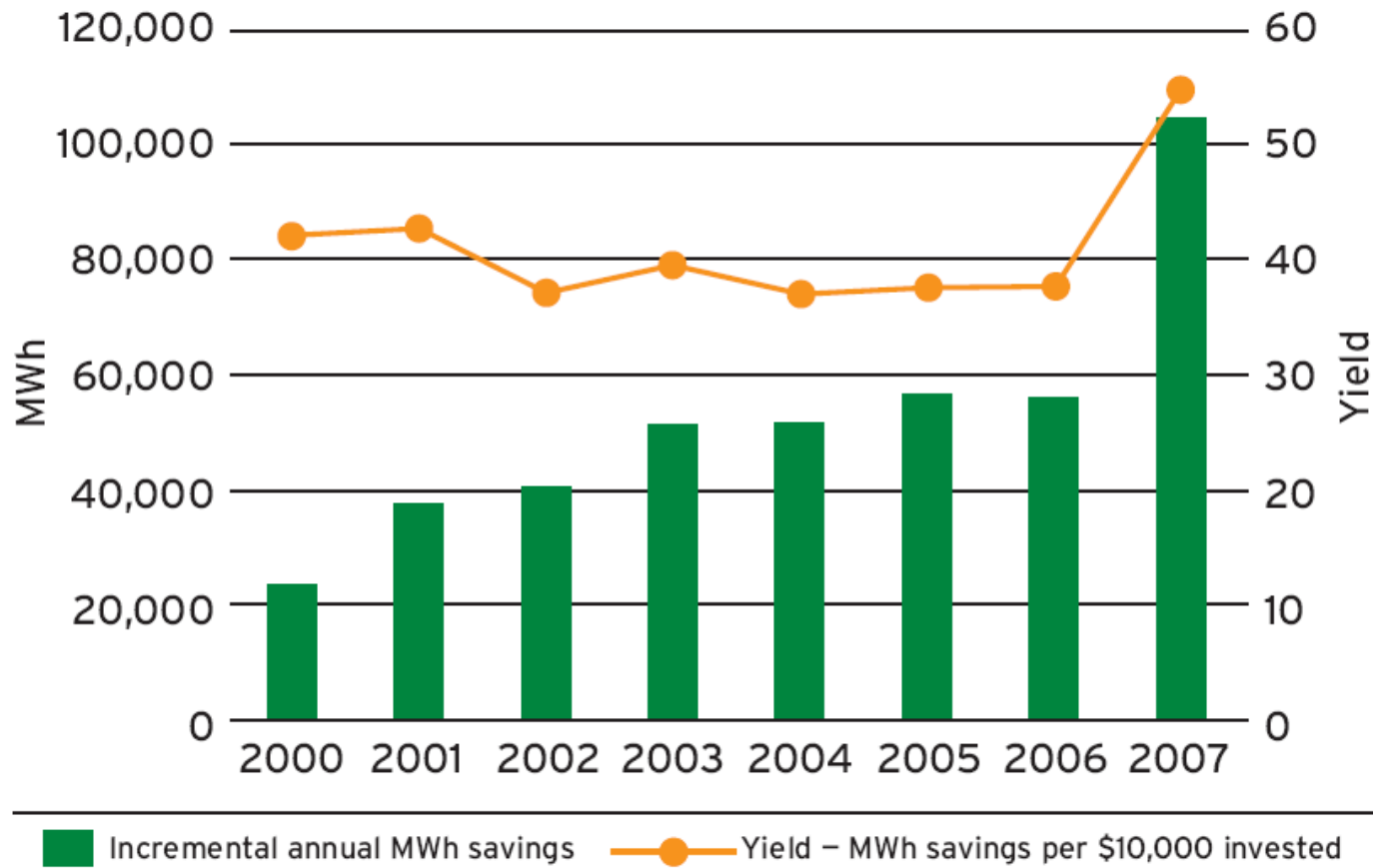
# Vermont

- Targets set in contract with Efficiency Vermont
- Have exceeded each year



# Vermont

## Efficiency Vermont MWh Savings and Yield: 2000-2007



# Markey HR 889 -- A Federal EERS

- 15% electric, 10% gas savings by 2020
- Includes CHP, recycled energy, codes and standards
- DOE to establish M&V protocols
- Allow bilateral contracts within state; within power pool with PUC permission
- 5 cents/kWh, 50 cents/therm buyout option
  - Funds can be used in state to operate EE programs
- States implement if “willing and able”
- States can set higher targets if they want

# Other Federal Activities

- Schumer-Landrieu working on Senate bill
  - Builds on their 2007 amendment
- Senator Bingaman draft bill
  - 20% RES with efficiency up to 5% EE
- President Obama's campaign platform calls for 15% electric savings by 2020, including codes and standards

# Savings Grow Over Time

|      | <u>Electric</u> |            | <u>Natural Gas</u> |            |
|------|-----------------|------------|--------------------|------------|
|      | Annual          | Cumulative | Annual             | Cumulative |
| 2011 | 0.33%           | 0.3%       | 0.25%              | 0.3%       |
| 2012 | 0.67%           | 1.0%       | 0.50%              | 0.8%       |
| 2013 | 1.00%           | 2.0%       | 0.75%              | 1.5%       |
| 2014 | 1.25%           | 3.3%       | 1.00%              | 2.5%       |
| 2015 | 1.25%           | 4.5%       | 1.00%              | 3.5%       |
| 2016 | 1.50%           | 6.0%       | 1.25%              | 4.8%       |
| 2017 | 1.50%           | 7.5%       | 1.25%              | 6.0%       |
| 2018 | 2.50%           | 10.0%      | 1.25%              | 7.3%       |
| 2019 | 2.50%           | 12.5%      | 1.25%              | 8.5%       |
| 2020 | 2.50%           | 15.0%      | 1.50%              | 10.0%      |

***Note: Savings count from date of passage***

# How Does a Federal EERS Affect States that Already Have a State EERS?

States can implement federal and state EERS simultaneously – same/similar utility filings, meet higher targets

States can set higher targets to gain additional savings

States with targets greater than the federal targets also benefit from savings in nearby states

- Emission reductions
- Impacts on energy prices

# Impacts of a Federal EERS

(15% electric, 10% gas by 2020; savings over and above existing state EERS's; includes codes & standards)

- Peak demand savings of 90,000 MW (300 power plants, 300 MW each)
- CO2 emissions down 260 MMT in 2020 (equivalent to taking 43 million vehicles off the road for a year)
- 260,000 net jobs created
- Net savings of \$144 billion (B/C ~3:1)

# For More Information

ACEEE EERS webpage:

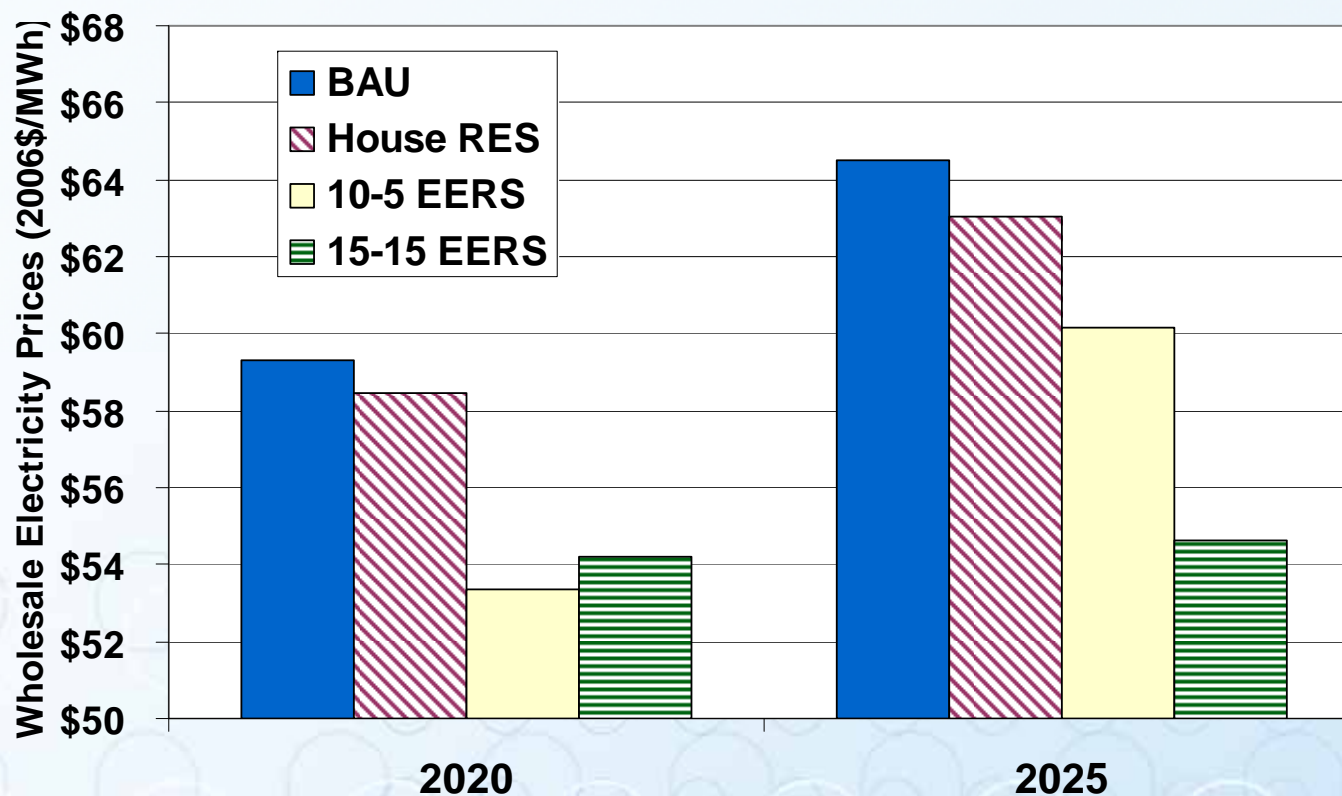
[www.aceee.org/energy/national/eers.htm](http://www.aceee.org/energy/national/eers.htm)

(Markey bill, fact sheet, PPT, state-specific analyses)

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202-507-4000

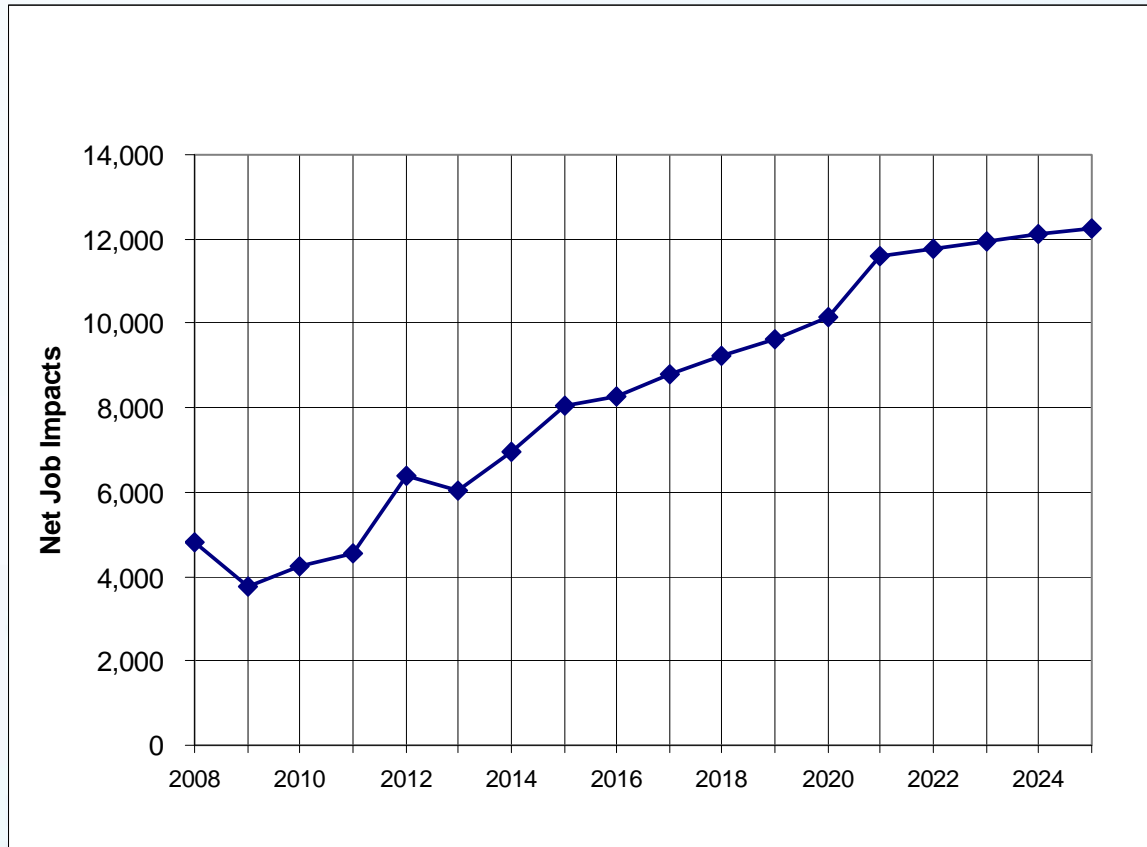
# Midwest Wholesale Electricity Prices in Business as Usual & Efficiency Scenarios



Source: ACEEE Dec. 2007 EERS-RES study

# Efficiency Programs Generate Jobs

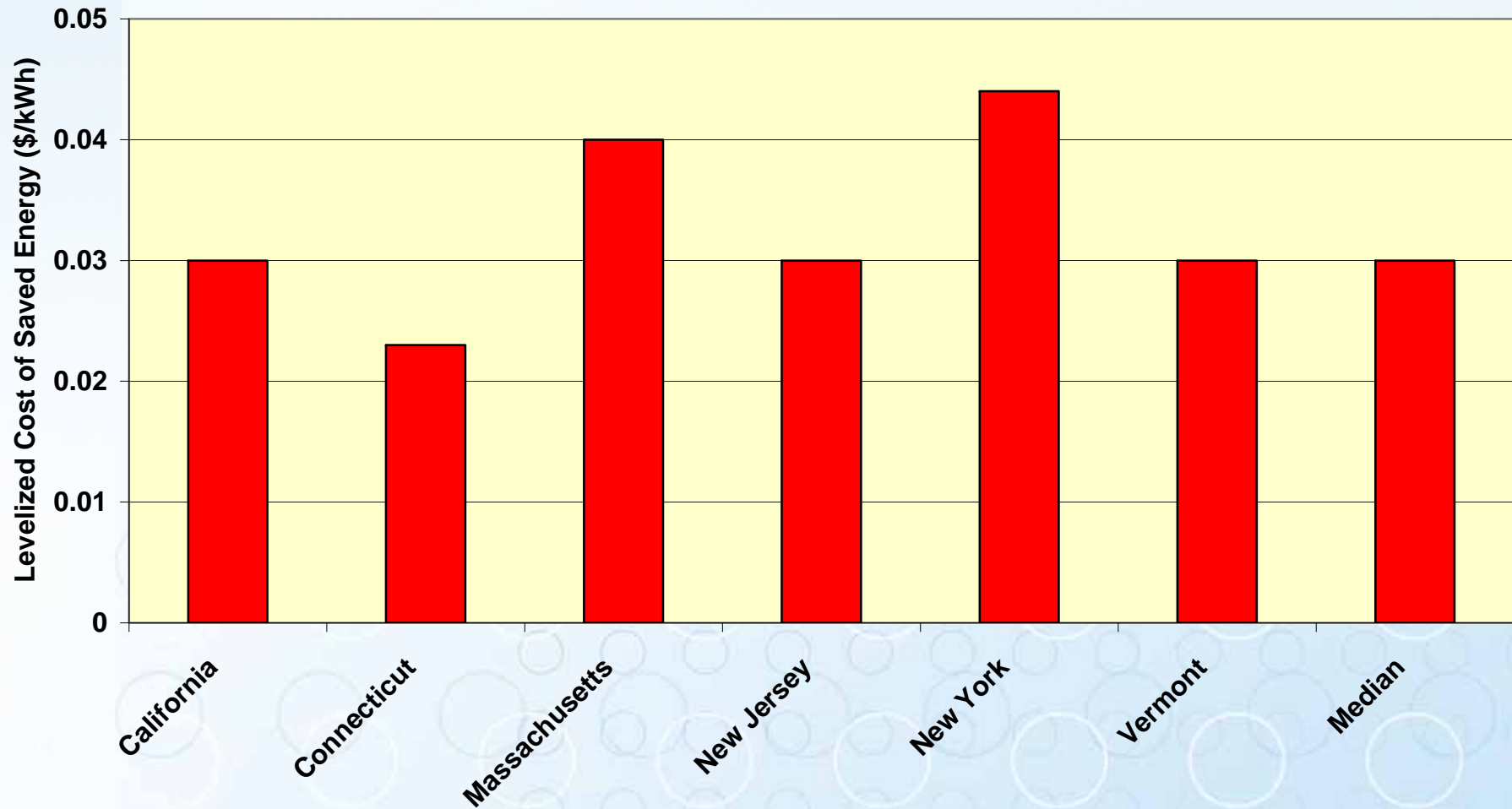
(Maryland 29% savings by 2025 scenario)



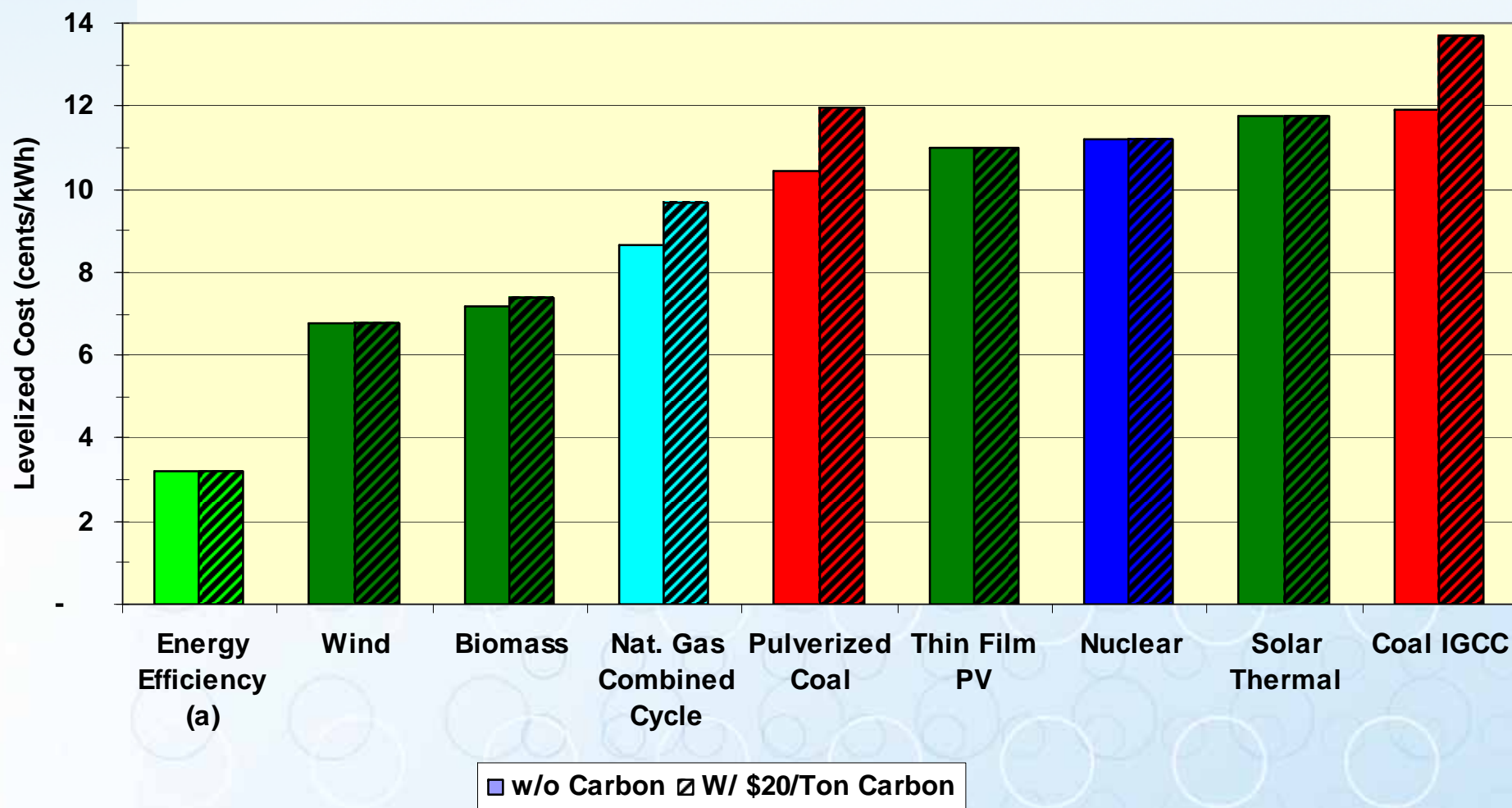
Source: ACEEE Feb. 2008 Maryland report

# Efficiency Resources Cost Effective

Evaluated results of All-Sector State-Level Energy Efficiency Programs



# Cost of New Electricity Resources



Source: Lazard 2008 for NARUC (midpoint of range)

# What Markets Do We Work In?

