

*Creating A Greener Energy Future For the Commonwealth*

## ***MA Energy Future***

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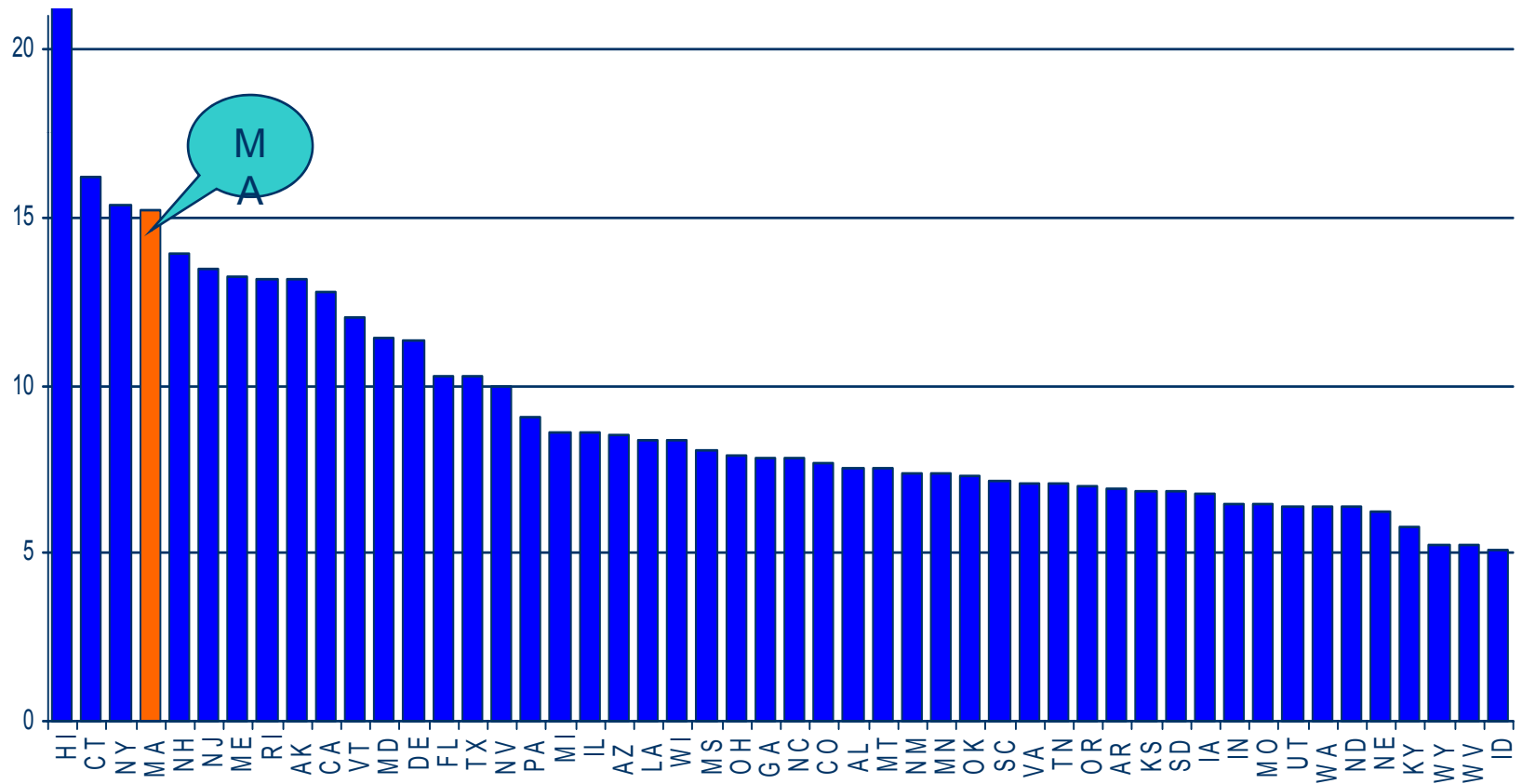
## **DOER Mission**

### ***Creating a Greener Energy Future, economically and environmentally:***

- Achieving all cost-effective energy efficiencies,
- Maximizing development of greener energy resources,
- Creating and leading implementation of energy strategies to assure reliable supplies and improve relative cost, and
- Supporting clean tech companies and spurring clean energy employment.

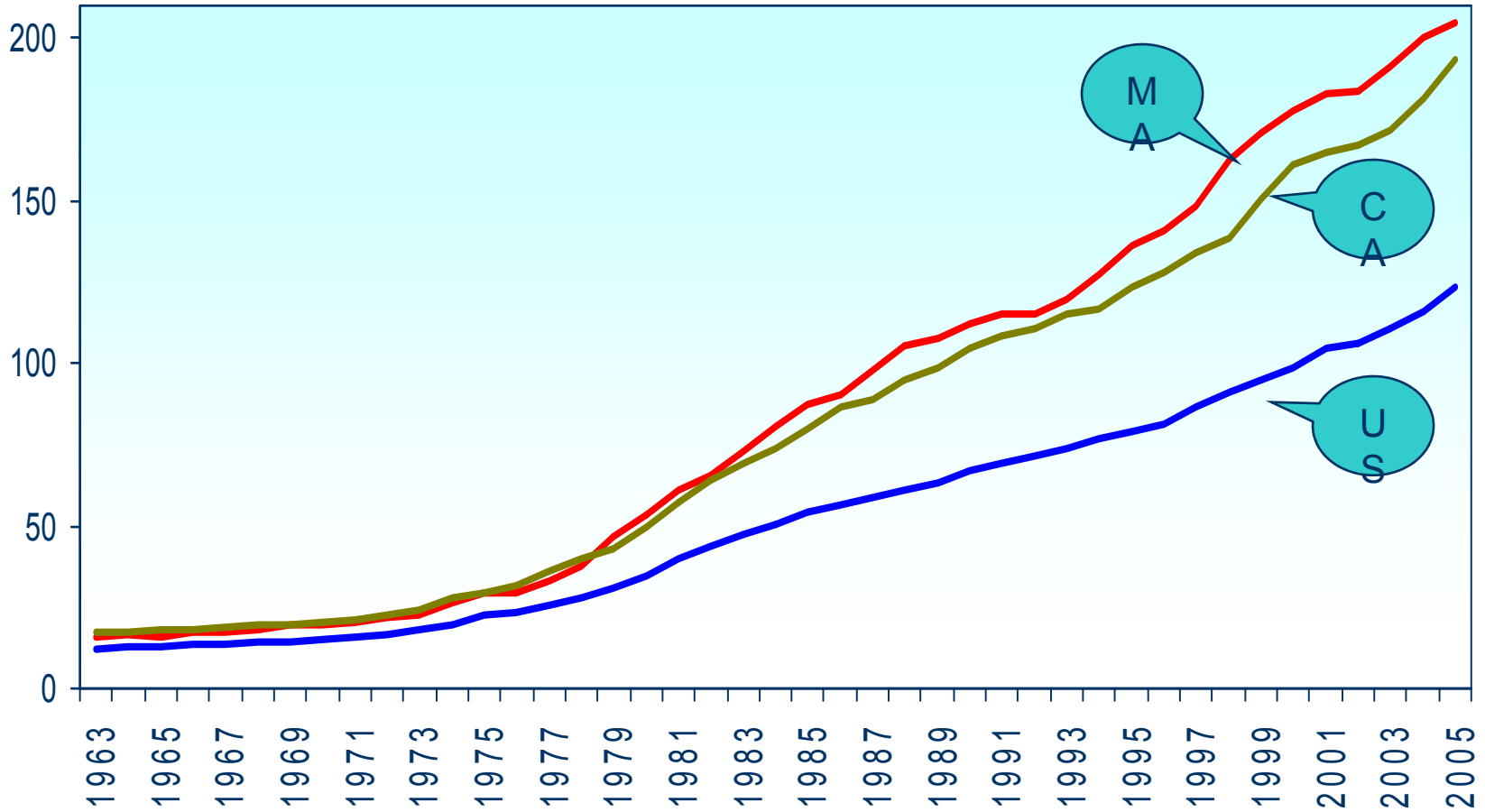
# High Electric Prices

2007 Retail Electric Price  
(Cents per kWh)



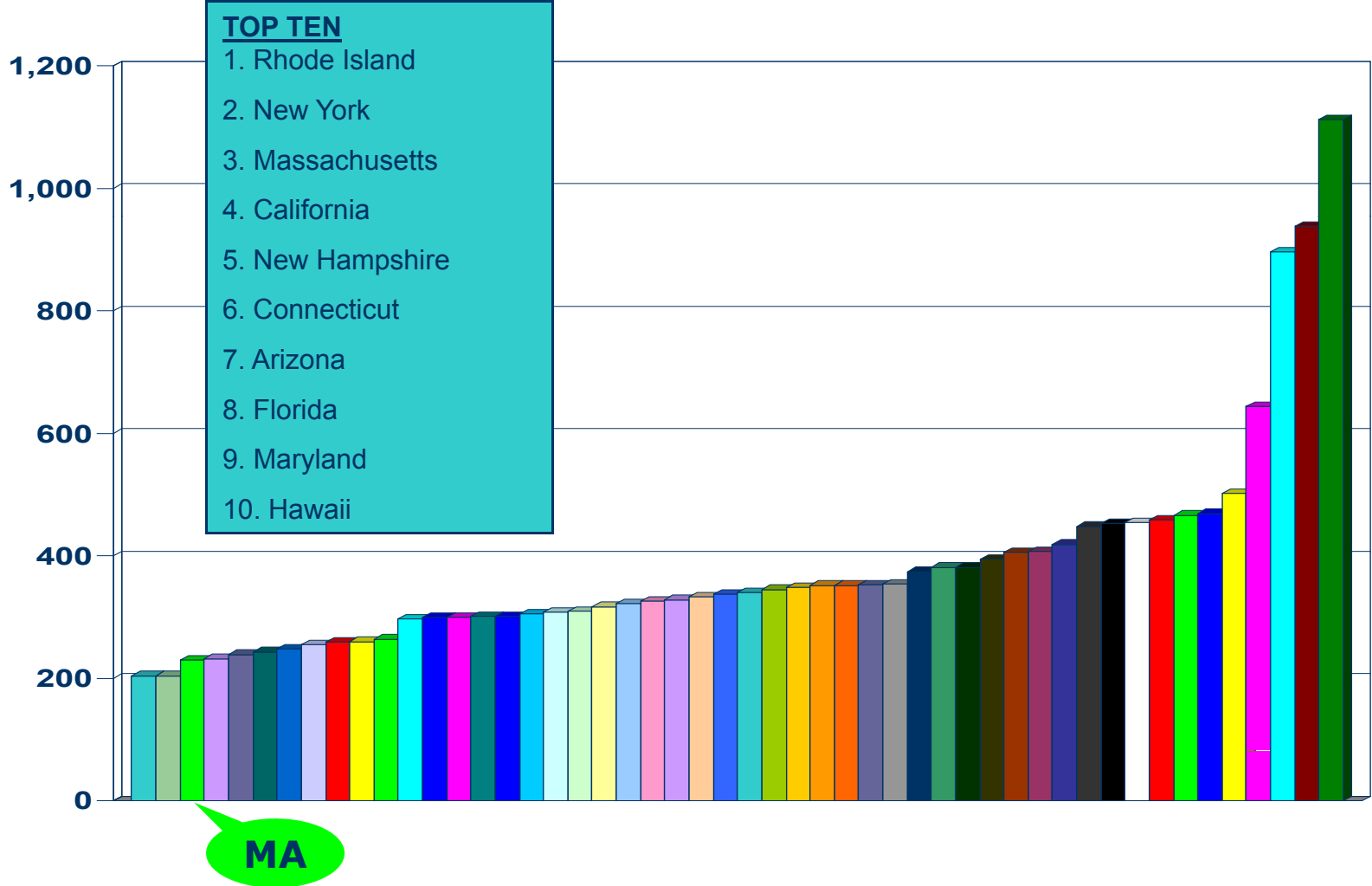
# MA: High Energy Productivity

\$GDP/MMBTU

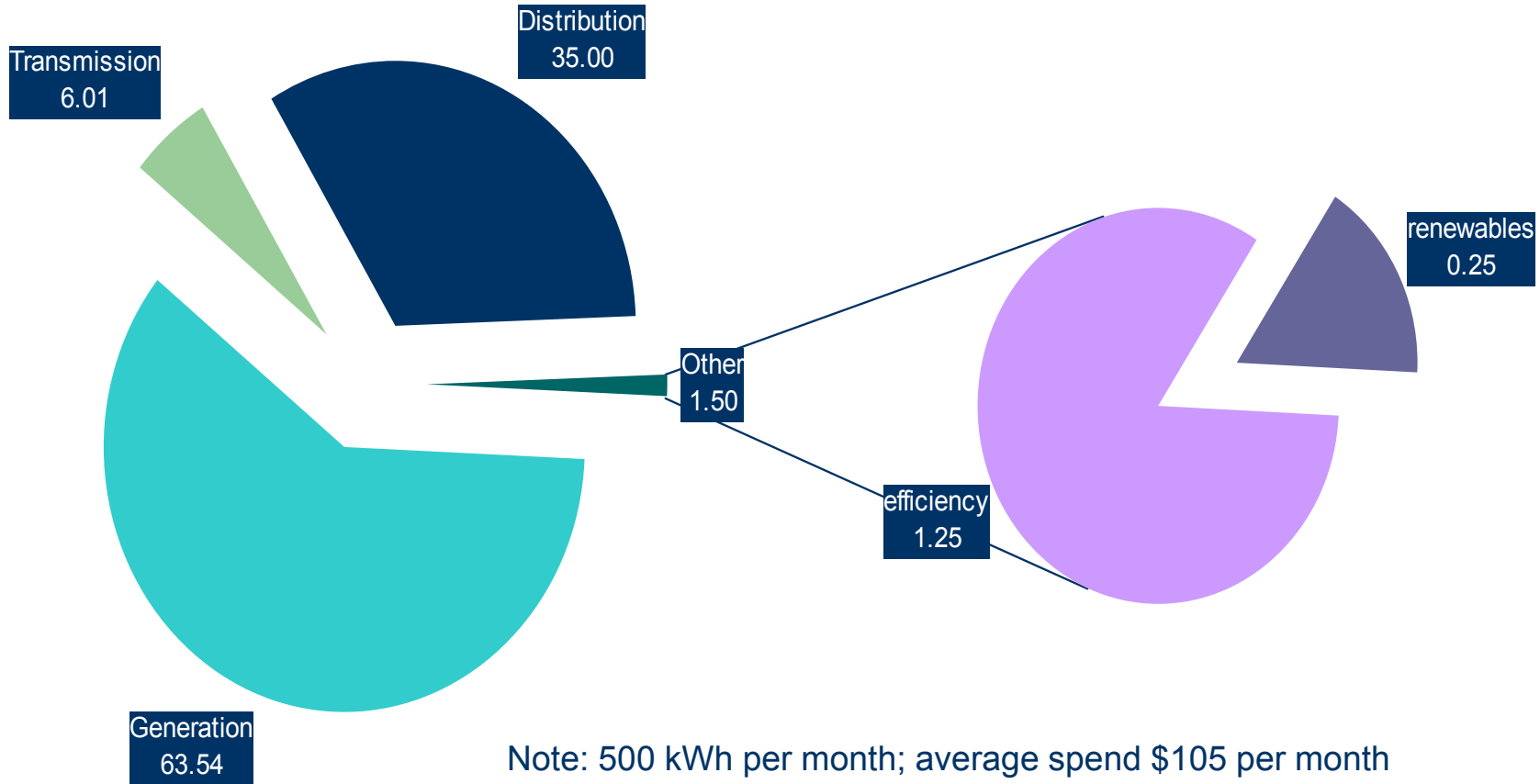


Source: EIA/Census

# Least Energy Use Per Capita



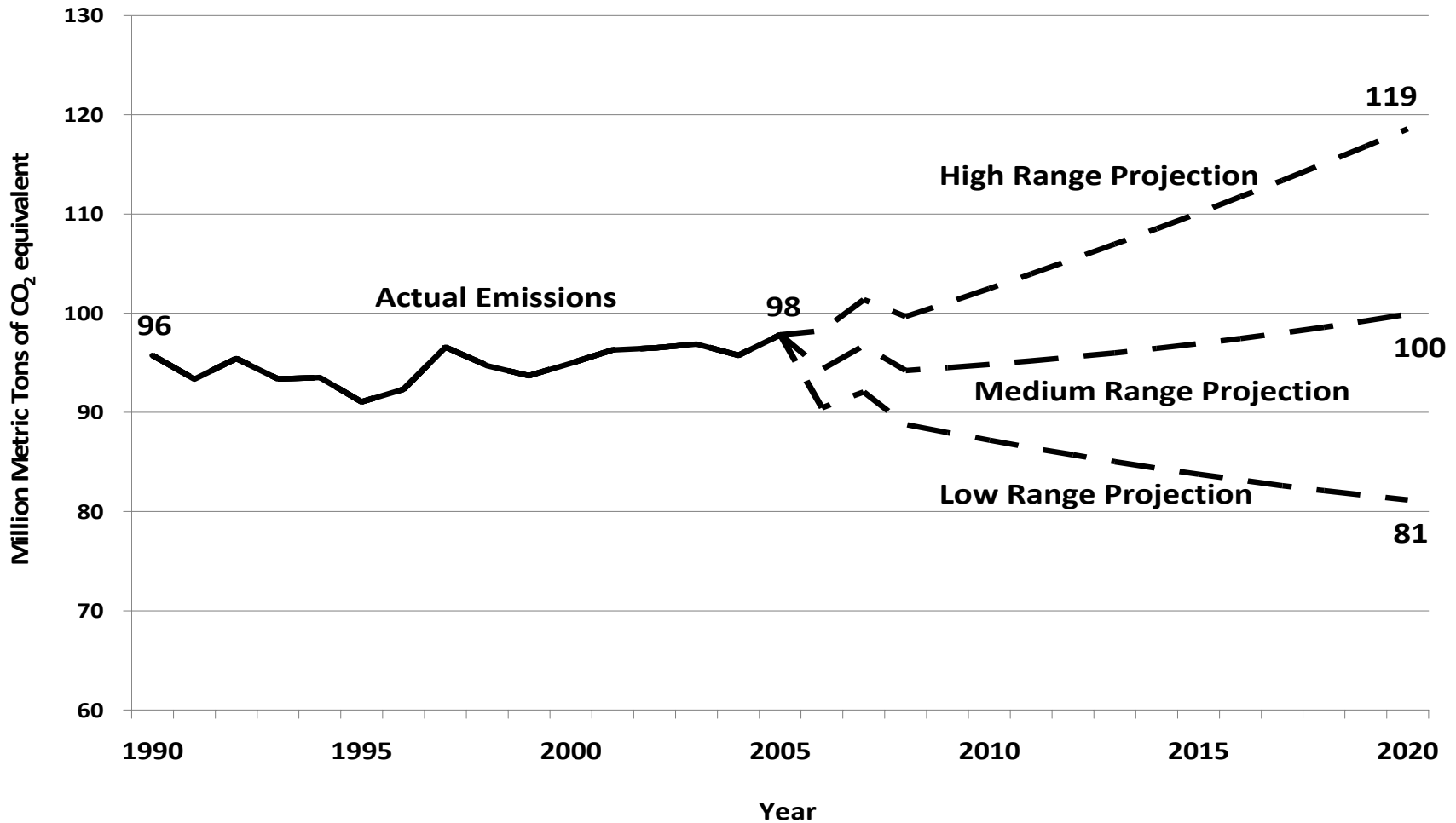
# Average Residential Monthly Electricity Spend



## Many Policy Levers

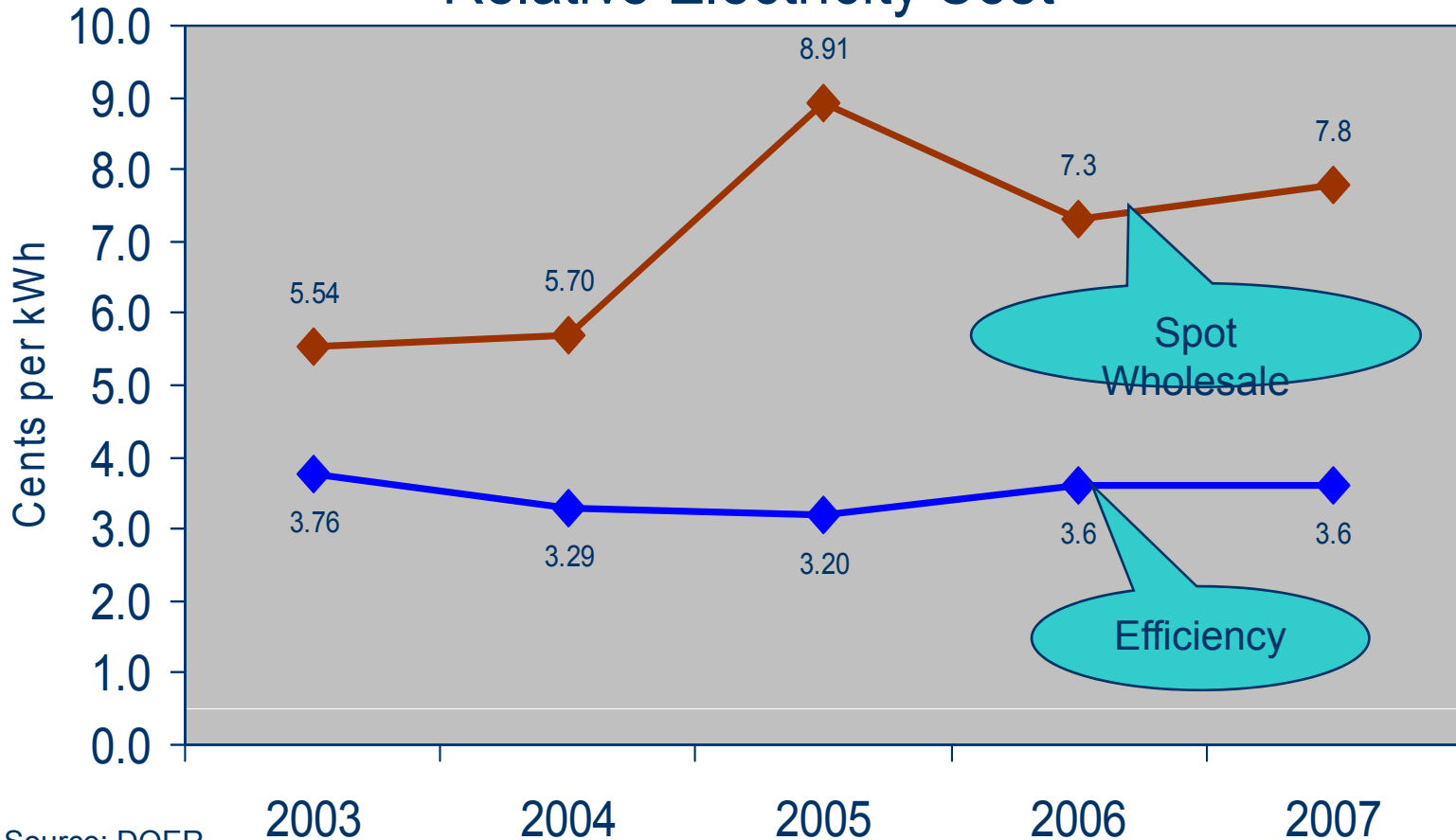
- Executive
  - LBE
  - Decoupling
  - RGGI
  - Renewables
    - PV: 250 MW 2017
    - Wind: 2000 MW 2020
  - ZNEB
  - Governor’s Energy Challenge
  - MEPA
- Legislation
  - Green Jobs
  - Ocean Management
  - Clean Energy Biofuel
  - Global Warming
  - Green Communities
    - Building Codes
    - Smart Grid Pilot
    - Least cost Procurement
    - Communities
    - Renewables
- Stimulus

**Massachusetts Proposed 1990 Baseline and 2020 BAU Projection**

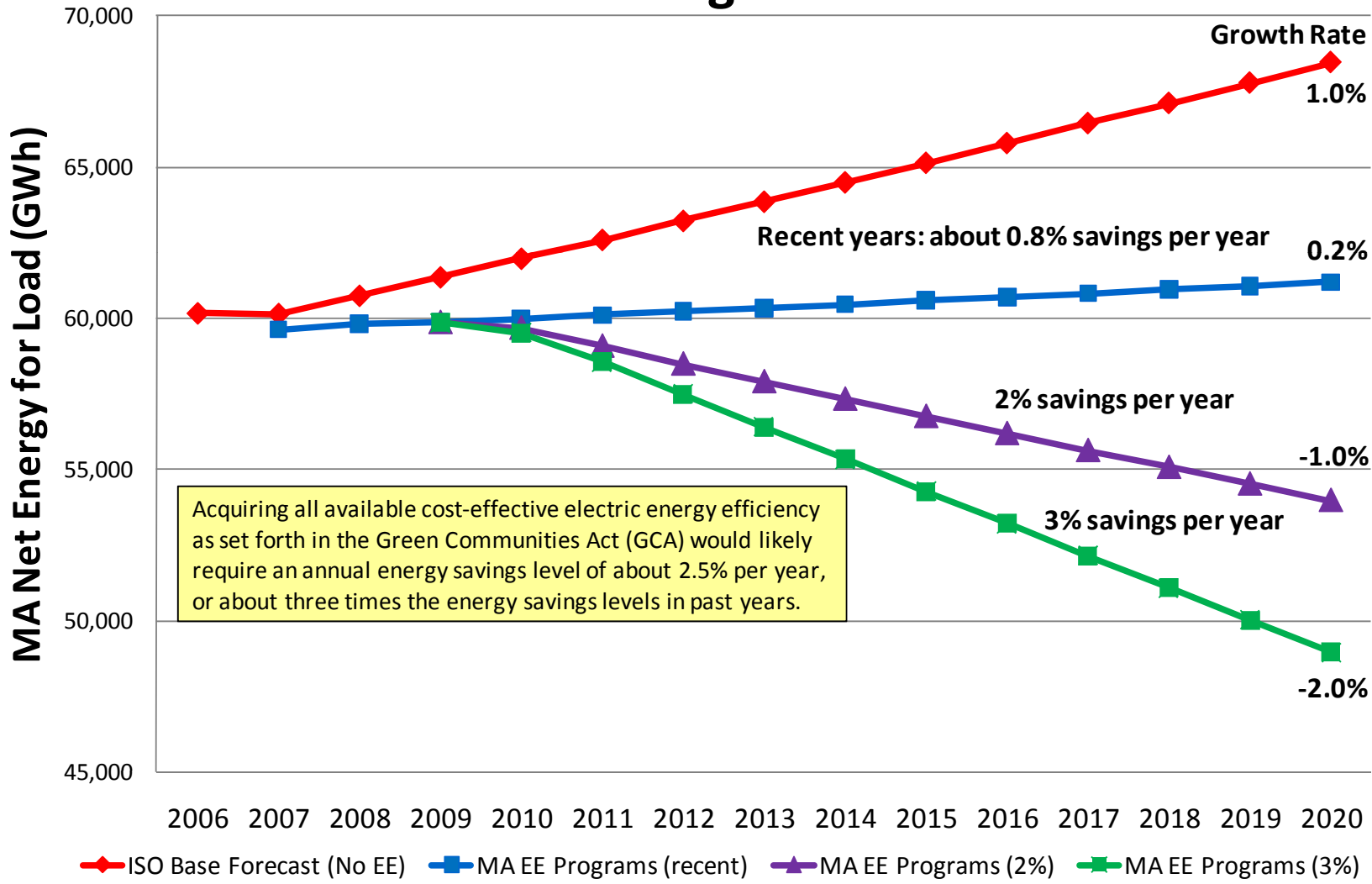


# Efficiency is low cost option

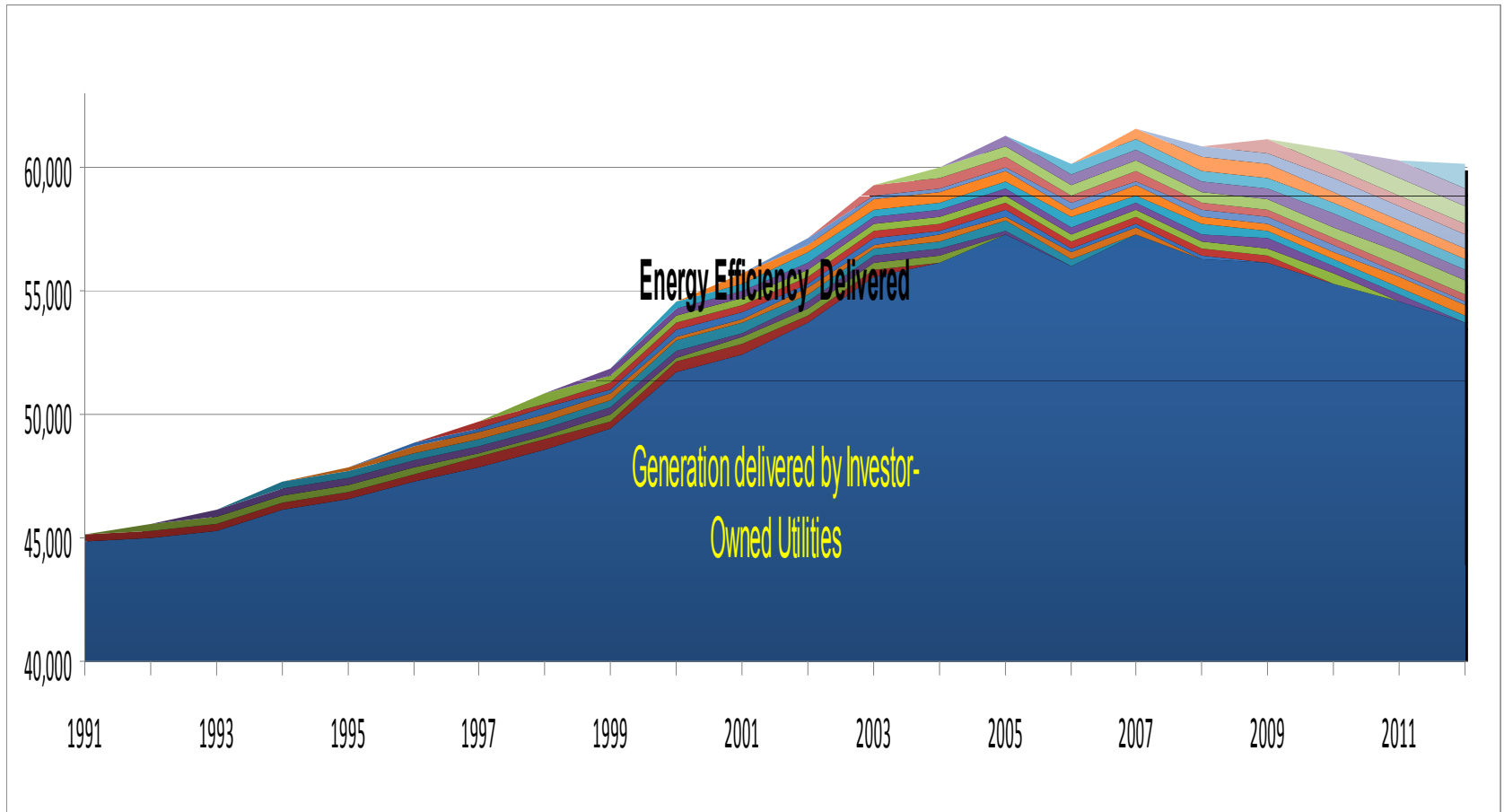
## Relative Electricity Cost



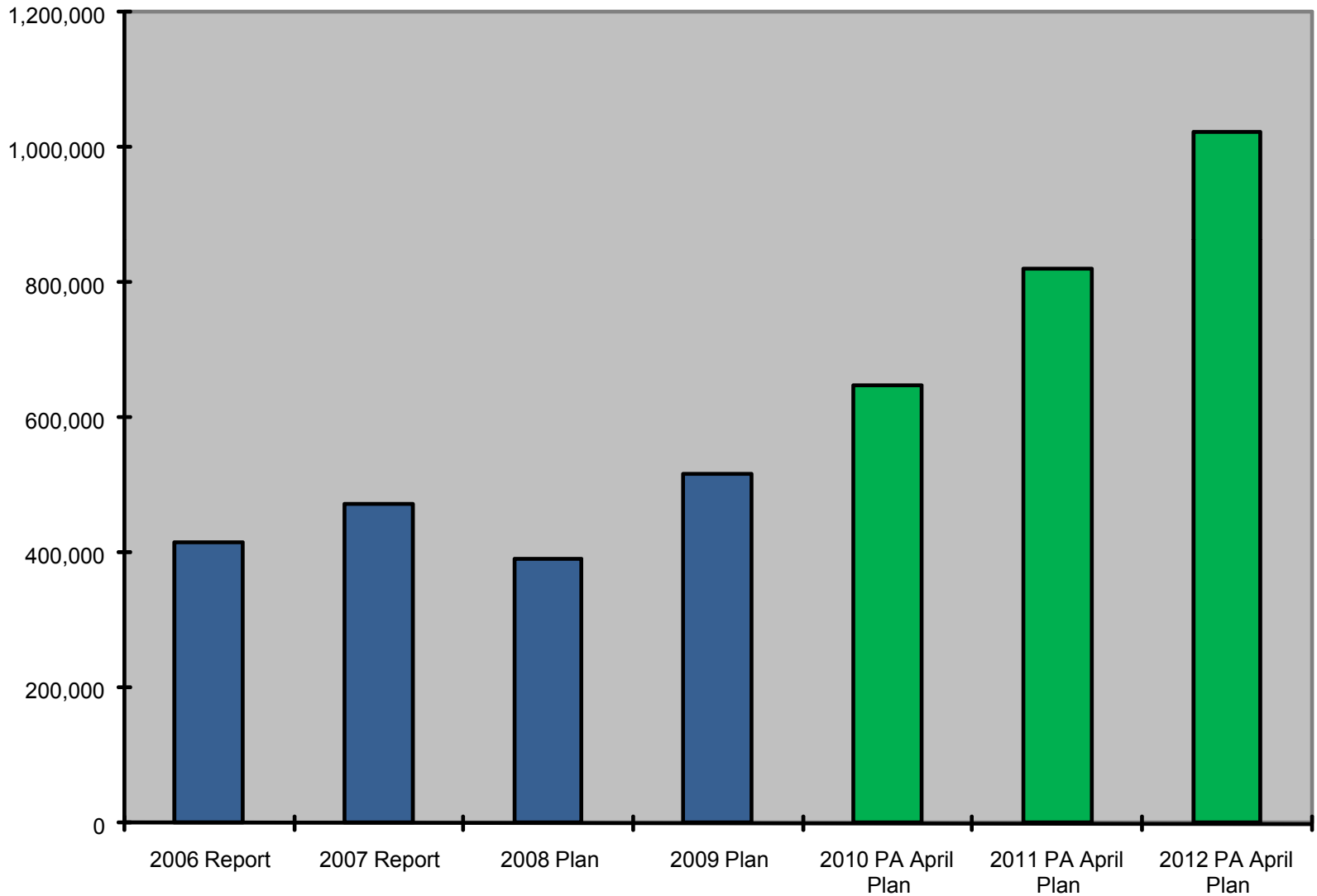
# MA EE Electric Savings: What is Possible?



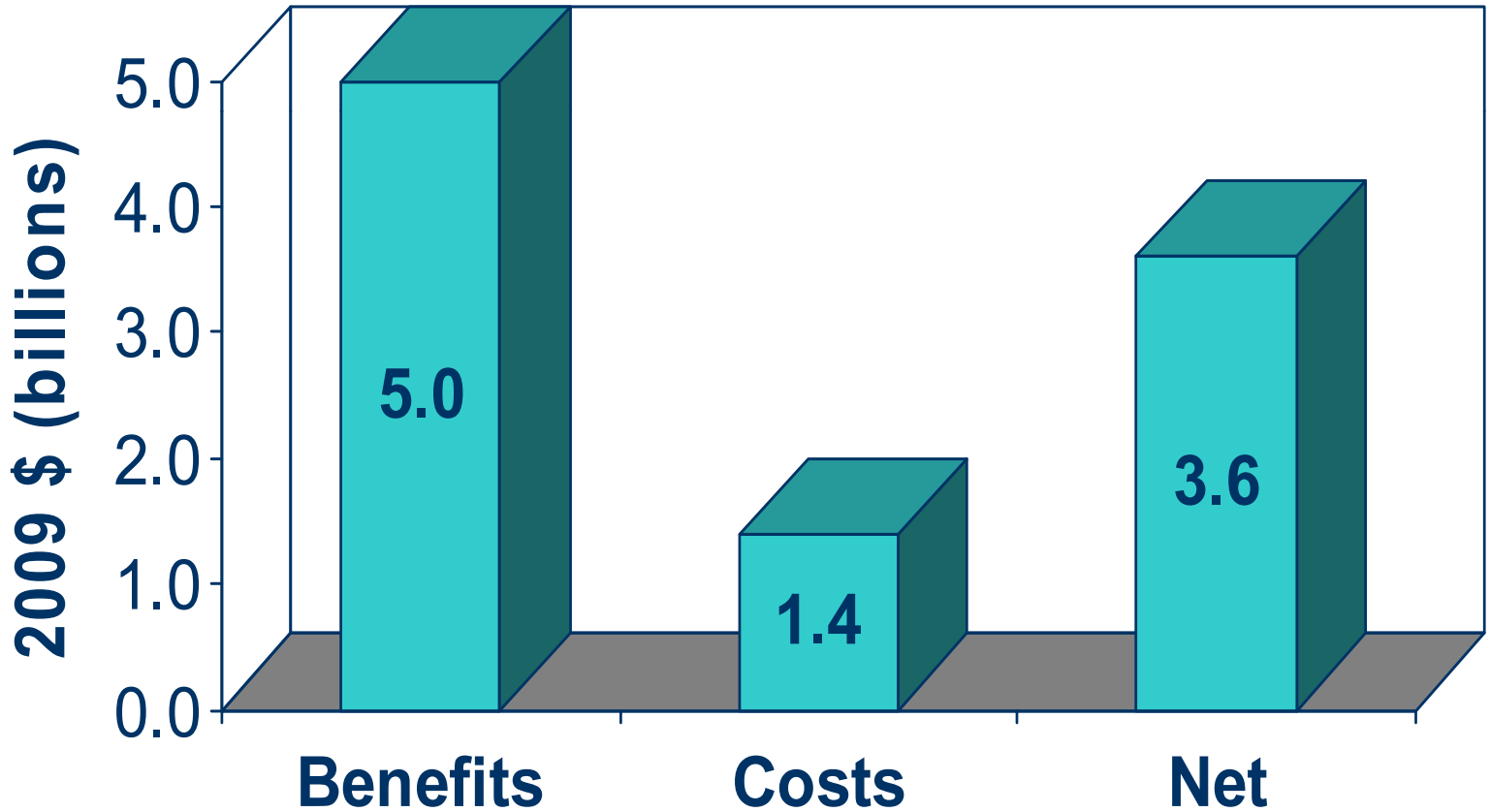
# Reducing Energy Waste



## Annual Energy Savings – Electric Programs (MWh)



# Electric Efficiency Programs 2010-2012



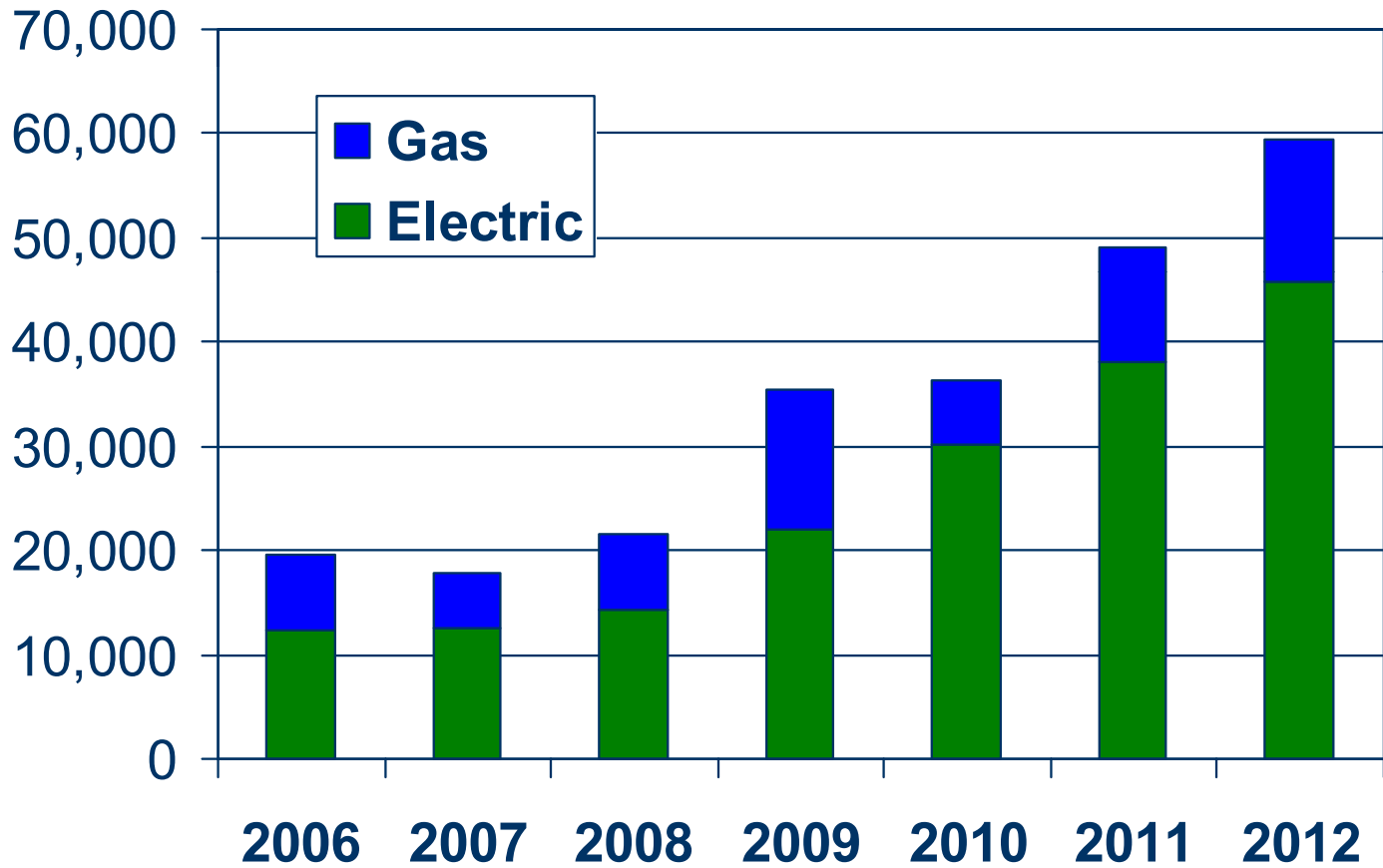
## Typical Residential Energy Efficiency Measures

Approx. range of % total energy savings:

- Site visit w/CFL bulbs and Direct Hot Water measures (2 to 5%)
- Plus air sealing & duct sealing (5 to 15%)
- Plus wall/attic/basement insulation (15 to 30%)
- Plus upgraded furnace/boiler and thermostat (25 to 40%)
- Plus upgraded appliances & AC (30 to 45%)
- Plus replacement windows (35 to 50%)
- Deep Energy Retrofit – All of the above plus additional building shell treatments (50%+)

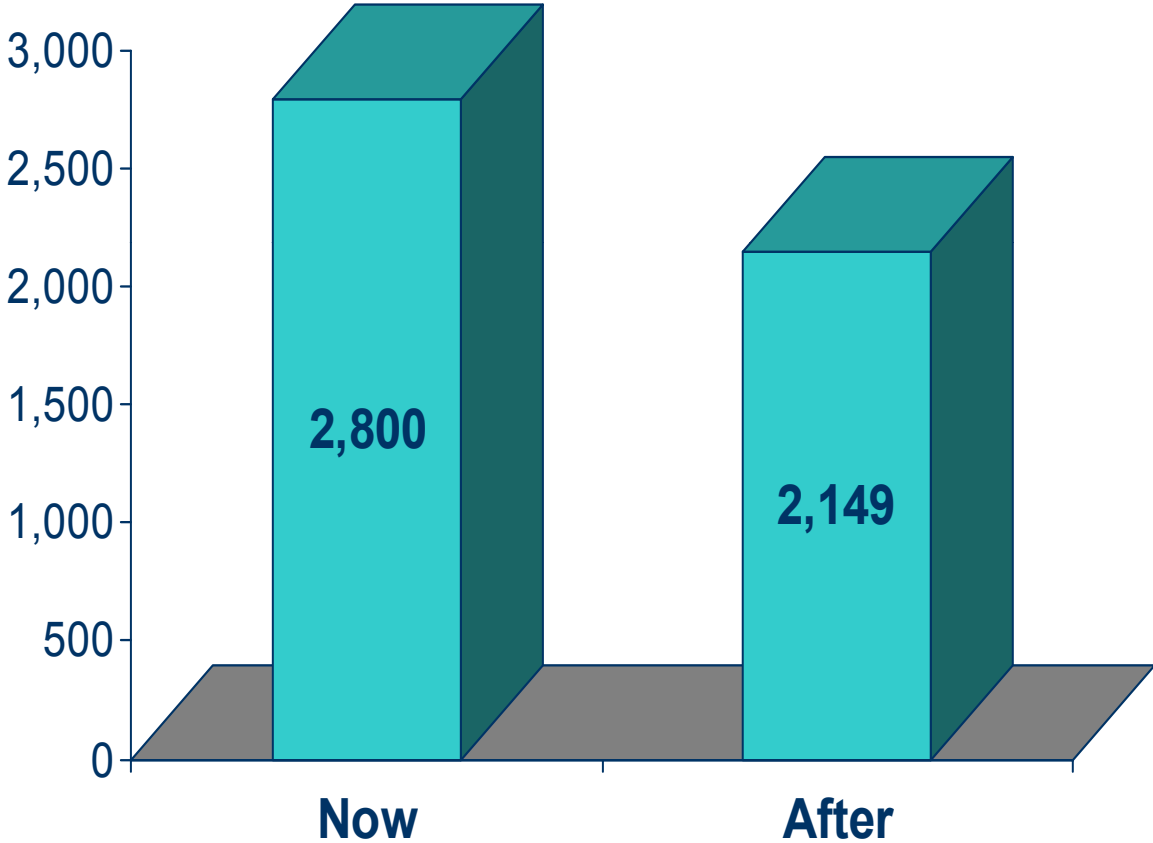
*Note: These are estimates. Resulting energy savings highly dependent on home's baseline efficiency and, especially with electric measures, occupant behavior. Source: EEAC Consultants*

## Residential Retrofit Participants



Residential Retrofit Participation (people who get energy audits, special home visits, or inspections)  
 2006 – 2008 Actual Reported  
 2009 Projected based on Q1 data  
 2010-2012 From July 16 Plan

### Typical Residential Total Energy Bill Before and After Participating



Note: Typical home heated by natural gas. Includes electric and gas savings.

## Other Efficiency Highlights

- Statewide programs
  - Branding
  - Consistency
  - Streamlining, reducing costs
- Proactive outreach and education to customers
- Creating a dynamic profile of each building and tracking changes over time
- Multicultural and multilingual
- Pilots to figure out more/better/faster
  - Deep Energy Retrofits
  - Positive Energy, Smart Power, Grounded Power, Energy Smackdown, Governor's Energy Challenge
  - Community based outreach
- Penetrating new markets e.g. small family owned businesses

## **Closing thoughts**

- Our greener energy future:
  - ❑ Getting this right matters
  - ❑ Getting it done soon matters
  - ❑ Getting it done big matters
- Lots of policy levers need to be pulled in coordination – no simple solutions
- One size does not fit all
- Market solutions are delivering success