



# **Energizing Virginia: Efficiency First**

**The Role of Energy Efficiency and Demand Response in Meeting the Commonwealth's Electricity Needs**

**Presented to the COVES Conference**

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by

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

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

35 staff in Washington, D.C., Illinois, Delaware, Michigan, and Wisconsin

Focus on End-Use Efficiency in Industry, Buildings, Utilities, Transportation, & National Policy

Offer Conferences and Publications

Funding:

- Foundation and Federal grants (50%)
- Specific Contract work (20%)
- Conferences and Publications (25%)

# Project Overview

ACEEE State Project funded by Energy Foundation, U.S. EPA, & U.S. DOE to:

- Prepare annual State Policy Scorecard
- Prepare 4 state energy efficiency assessments per year
- Assist states with ongoing energy policy implementation
- VA project co-funded by WestWind Foundation and Agua Fund

## Overall Project Goals:

- Build foundation for public education on energy efficiency
- Provide key facts with respect to EE opportunities
- Inform policymakers on best policy practices

# Virginia Project Approach

State-specific data collection

Stakeholder outreach:

- State Government (GEPAC, SCC, etc.)
- Utilities and Co-ops
- Industrial consumers
- Public interest groups
- Low-income advocates

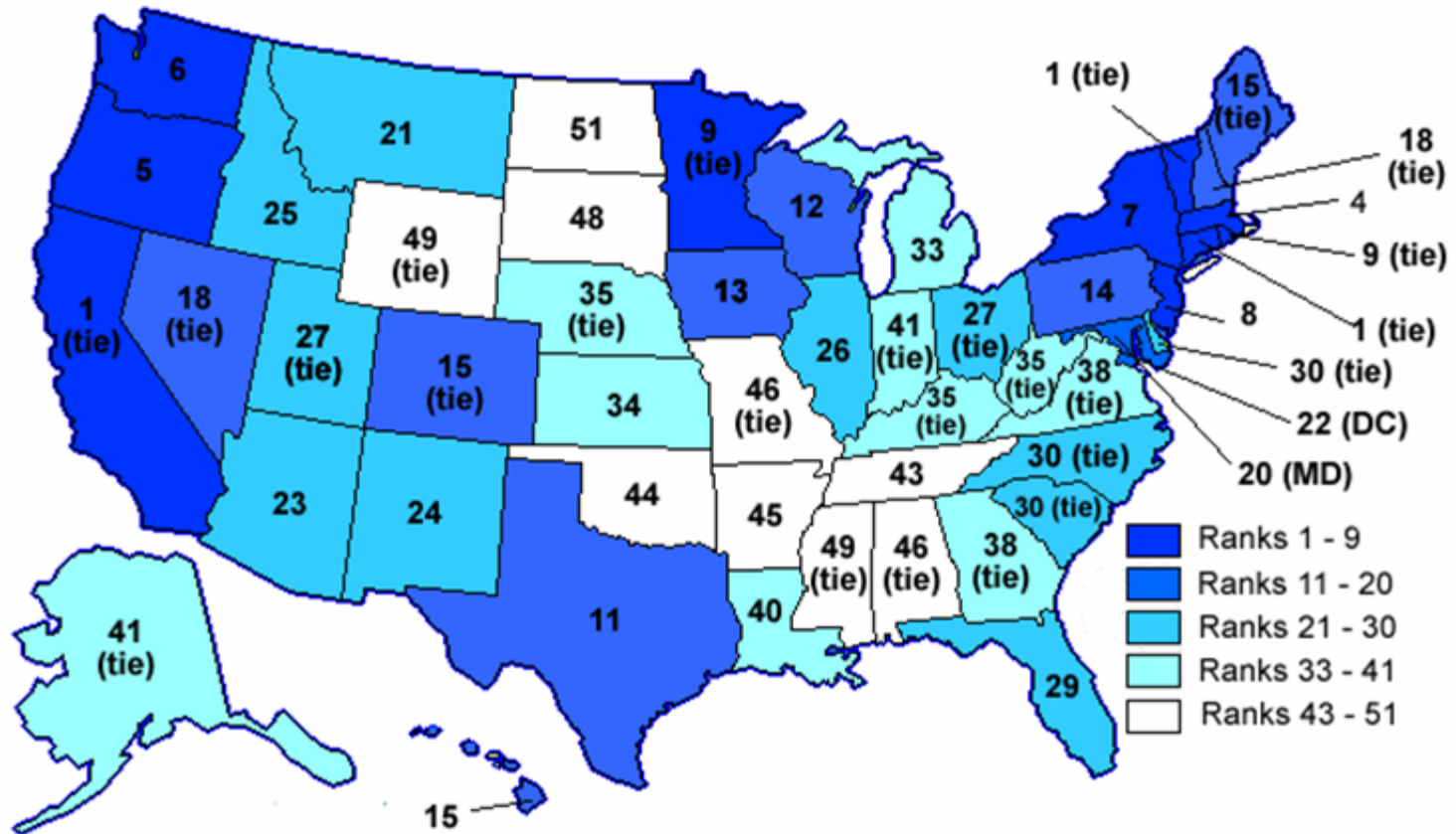
Analysis and report preparation

Report release

Policy Implementation Assistance

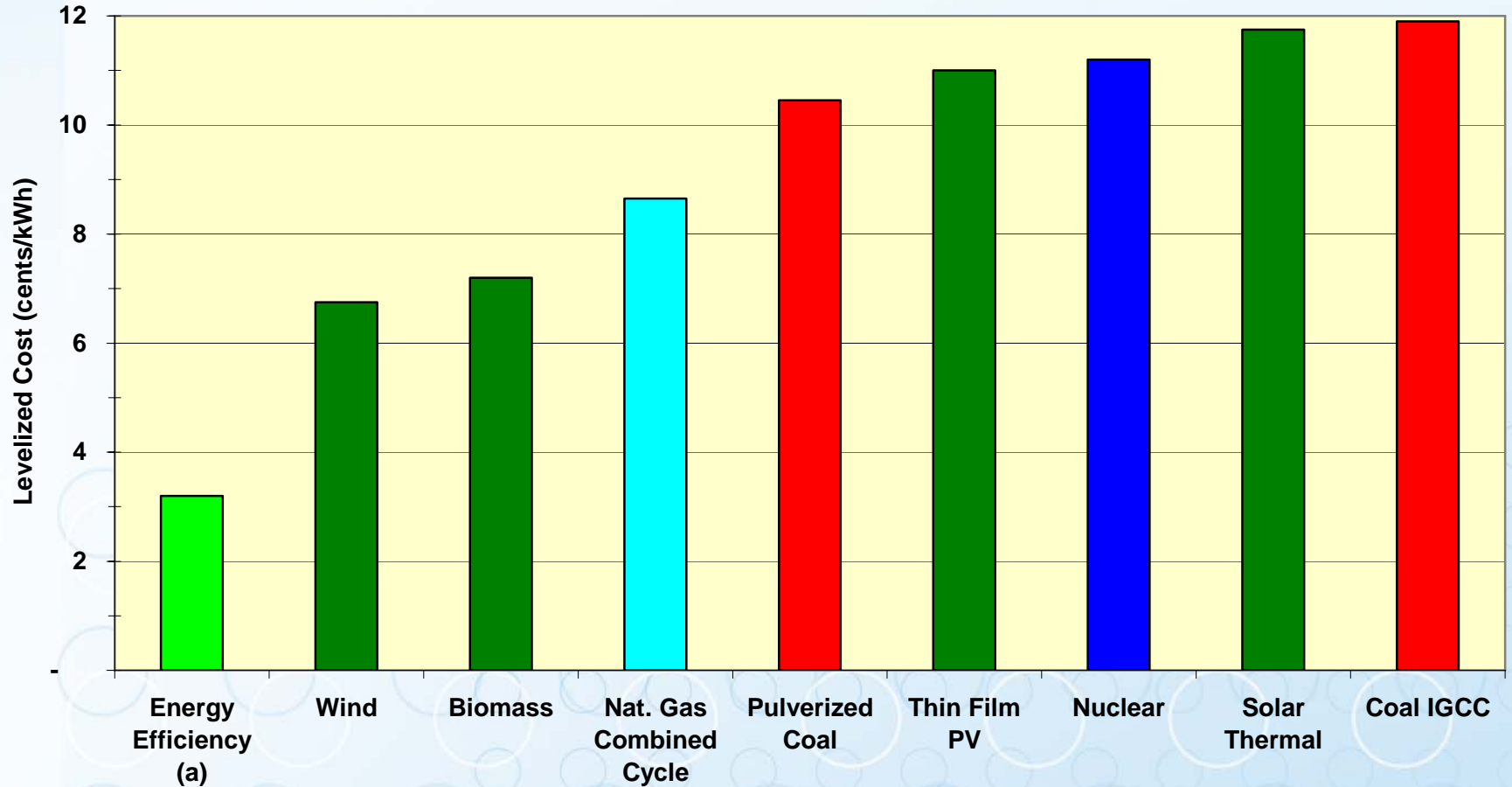
# Why Virginia?

## 2006 ACEEE State EE Scorecard



# Why Energy Efficiency? The 1<sup>st</sup> Fuel

## Average Cost of New Electric Resources

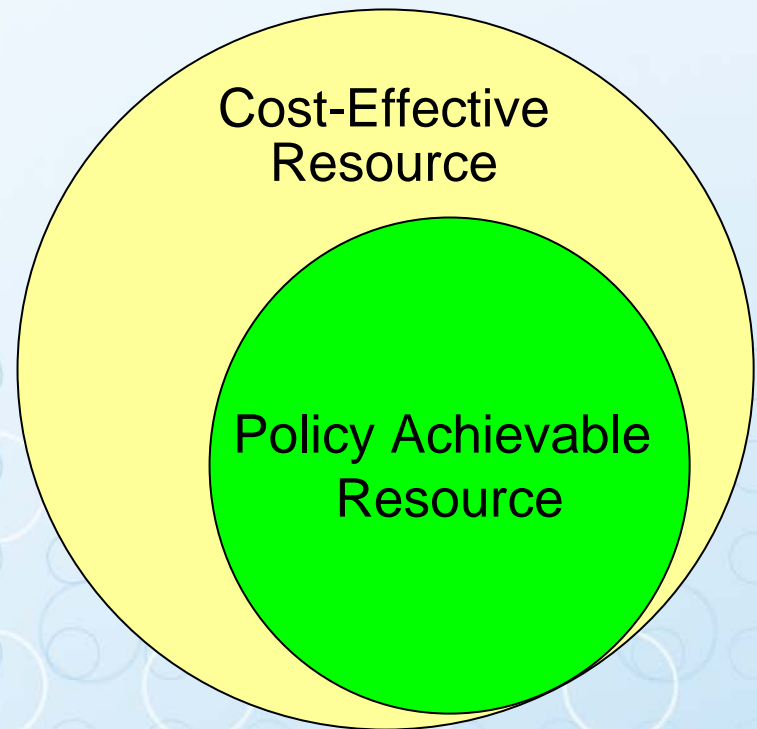




# Levels of Energy Efficiency Potential We Analyzed

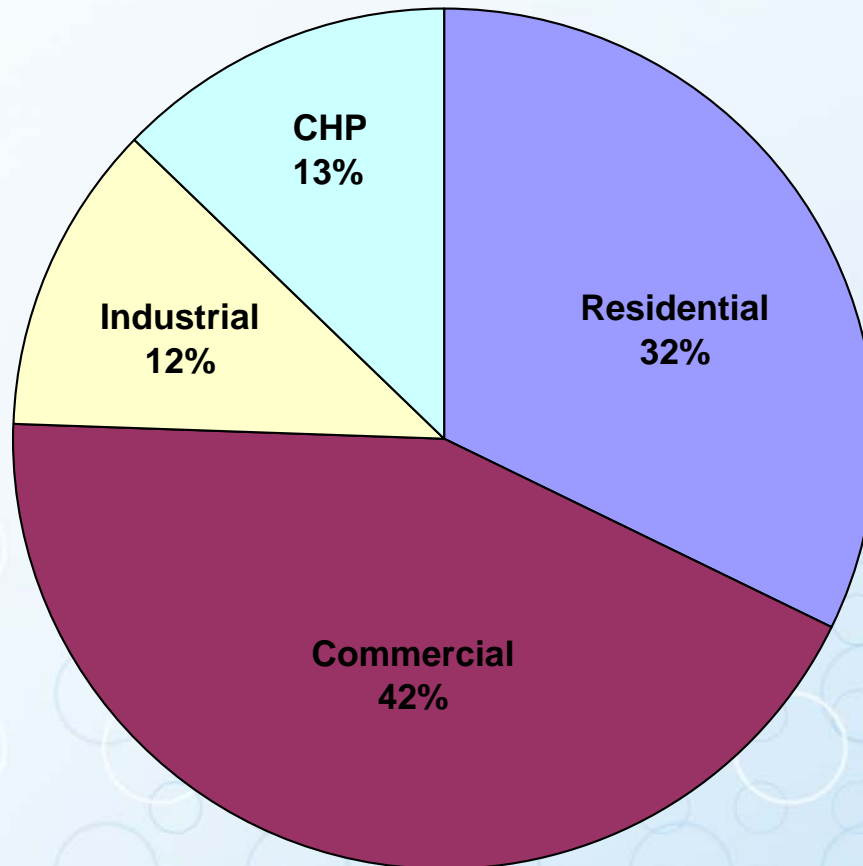
## Energy Efficiency Resource Potential in 2025

- **Cost Effective Resource = ~44,000 GWh (31%)**
- **Policy Analysis = ~28,00 GWh (19%)**



# Energy Efficiency Resource Potential

(44,000 GWh or 31% of Projected Electricity Use in 2025)

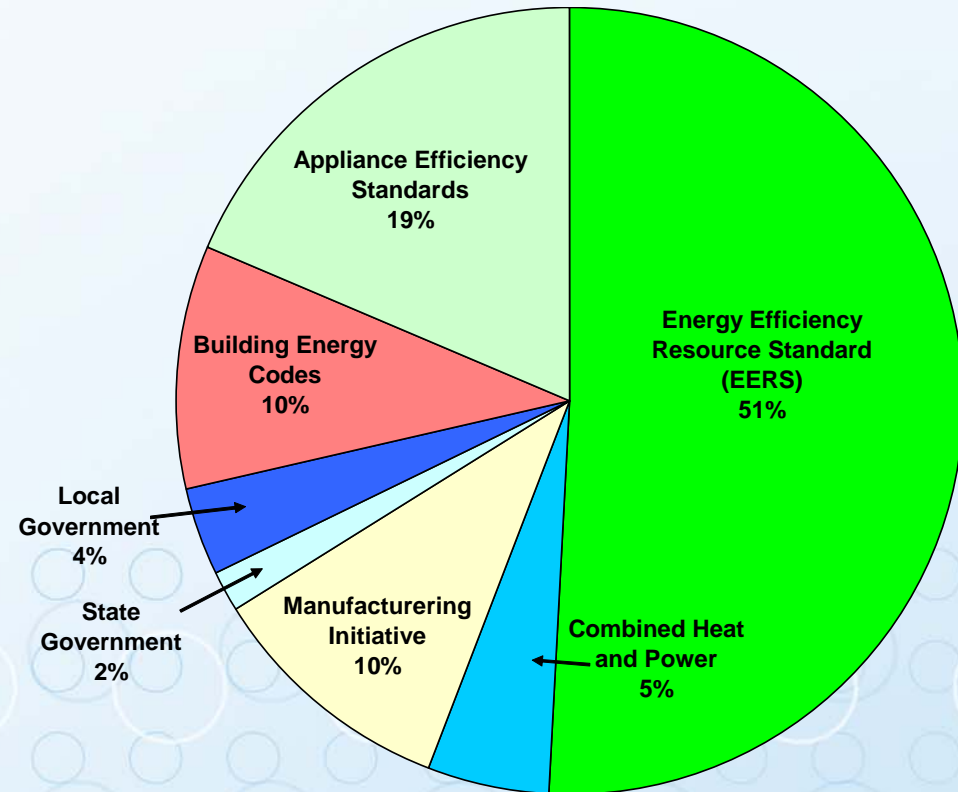




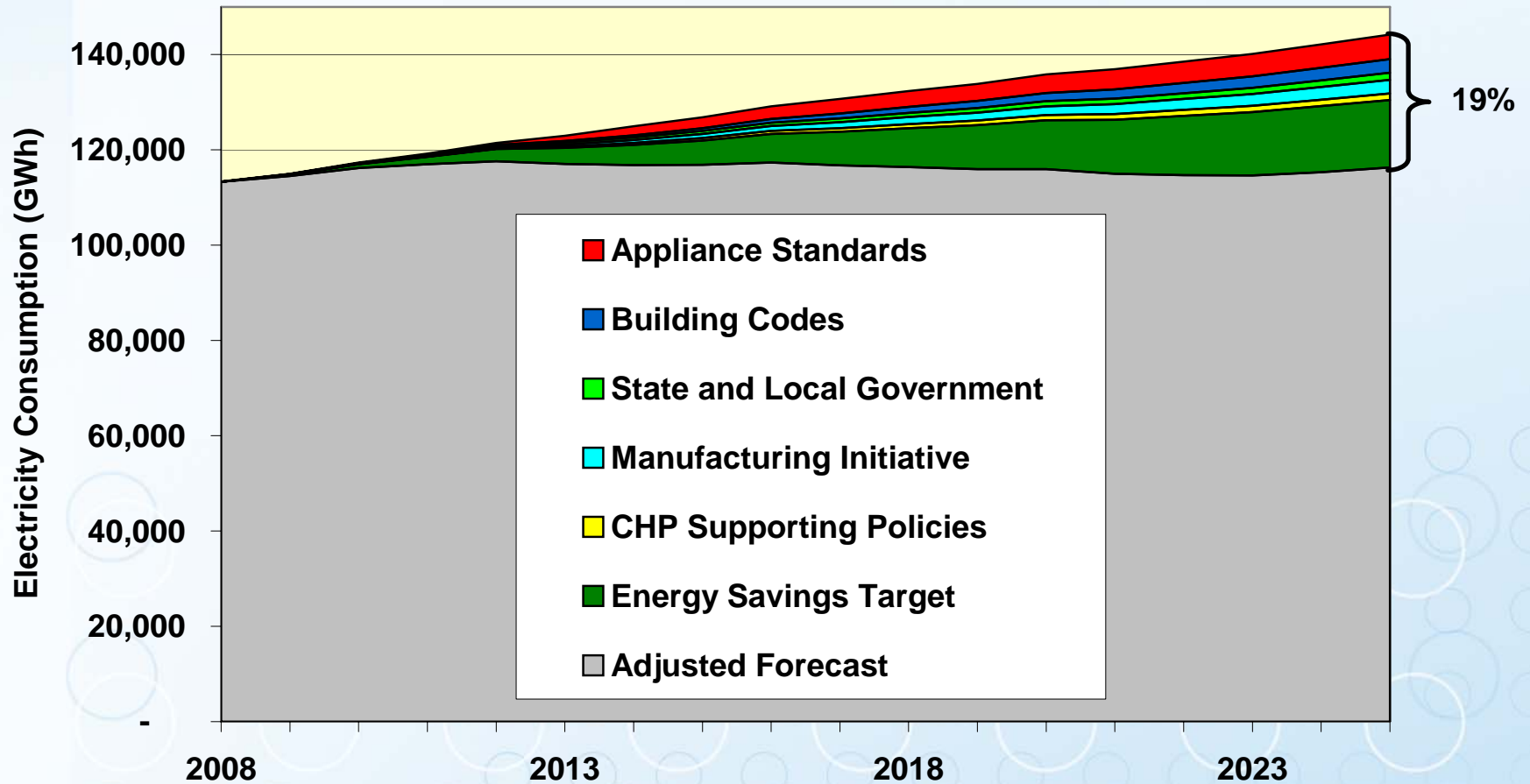
# Suite of 11 Policies Analyzed

Policies include:

- EERS
- Mfg Initiative
- CHP
- Codes & Standards
- Gov. Facilities
- Public Education
- Demand Response

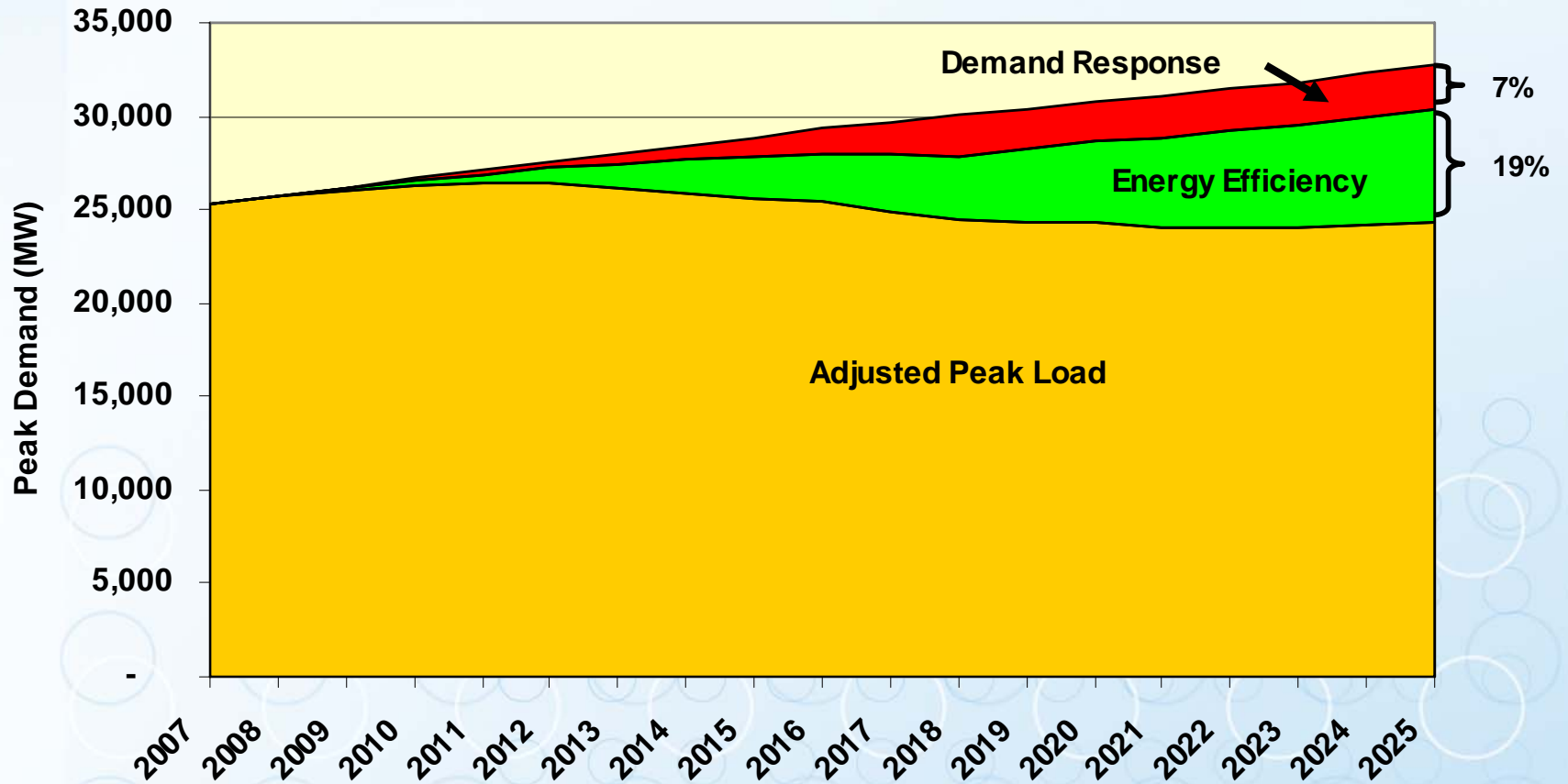


# Impact of Efficiency Policies on Electricity Needs in Virginia



# Impact of Efficiency and Demand Response on Peak Demand

2025 peak reduction = ~8400 MW (26%)



# Impacts of EE Policies

- \$26 billion cumulative gross consumer savings on electric bills by 2025 (on \$220 billion in electric bills in B.A.U.)
- \$11 billion cumulative energy efficiency investments through 2025
- **\$15 billion** cumulative *net* consumer savings on electric bills by 2025

# Impacts of EE Policies on Residential Consumers

With EE all residential consumers will see lower bills:

- \$5 net electric bill savings per monthly in 2015—4% reduction in average bill of \$124
- \$20 net electric bill savings per monthly in 2025—16% reduction in average bill

Consumers who invest in efficiency will realize a greater share of the savings.

# Net Impacts on EE Policies on VA Economy

<b>Net Macroeconomic Impacts</b>	<b>2015</b>	<b>2025</b>
Jobs (Actual)	675	9,820
Wages (Million \$2006)	63	583
GSP (Million \$2006)	202	882



# Global Warming Emissions Reductions

- Annual reduction of 28 million tons CO<sub>2</sub> in 2025
- Cumulative reduction of 240 million tons CO<sub>2</sub> through 2025

# Conclusions

- There are sufficient efficiency resources to meet the Commonwealth's growth in electric needs over the next 15 years
- Investing in efficiency will:
  - Reduce consumer electric bills
  - Ensure stable & reliable electric system
  - Promote new jobs & economic growth
  - Make important contributions to addressing global warming

# Contact and Report Information

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For more information visit: [www.aceee.org](http://www.aceee.org)

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