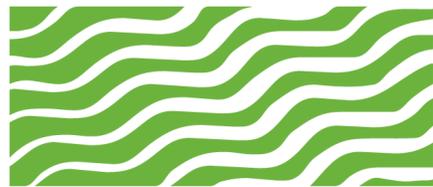


# **The Role of Energy Efficiency in Current Climate Legislation**



Joe Loper  
Alliance to Save Energy  
CSIS  
July 9, 2009



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**SAVE ENERGY**

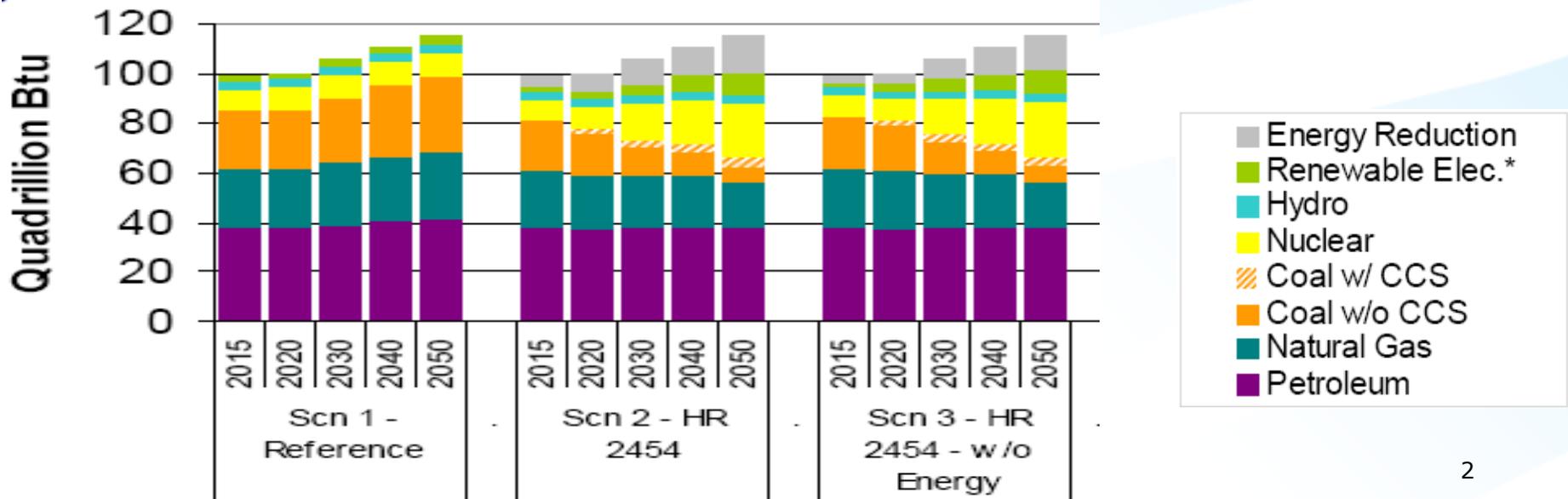
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# Meaningful Policy



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- **70% reduction in GHG emissions in 2050**
  - **From 2005 levels**
- Energy demand flat thru 2050
- Energy demand 12% below BAU in 2050
- Nuclear and EE biggest winners



Source: EPA Analysis of American Clean Energy and Security Act of 2009, June 23, 2009, p.11



**Slide 3**

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**A1**

ASE, 4/7/2008

# Complementary EE Policies and Program Funding

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- If market barriers not addressed
  - Increased overall cost of abatement
  - Greater burden on other sectors
  
- EE programs and policies get
  - 2% lower allowance prices
  - 4-6% lower electric and gas demand
  - *EPA Analysis, June 26*

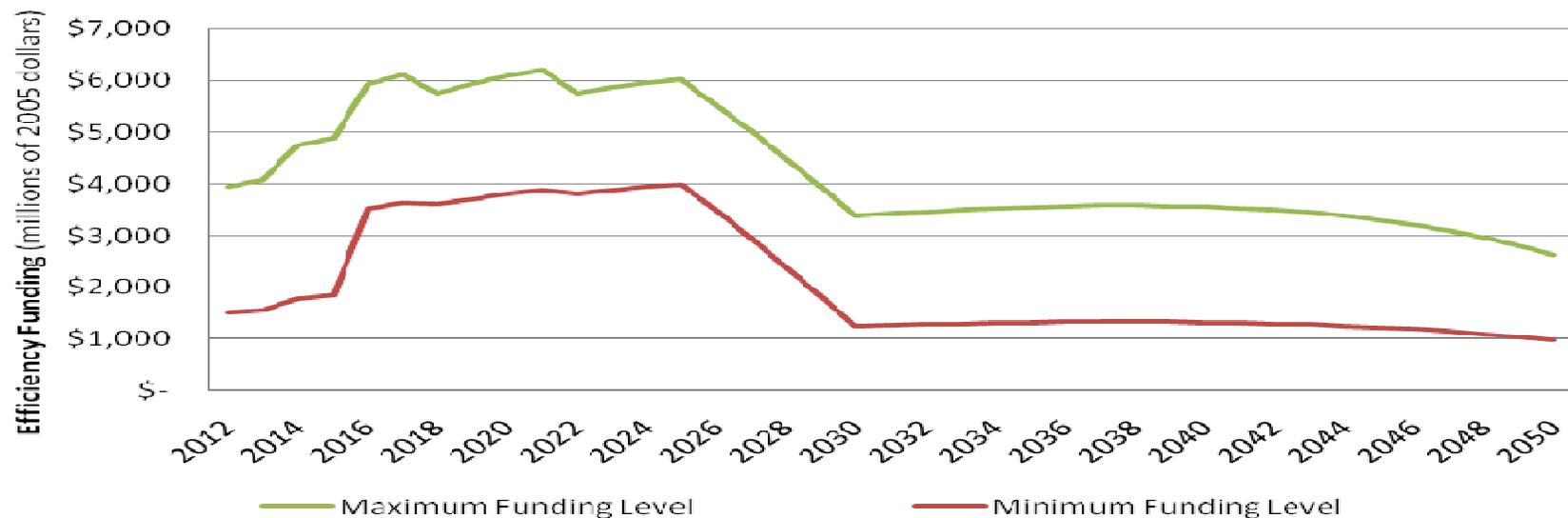


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# Complementary EE Funding

- 3-6% of total allowance value
  - \$85b to \$174b over 2012-2050
- Current EE funding
  - \$4b federal, state, utility
  - Stimulus \$16b “over 2 years”

**Figure 1 - Energy Efficiency Funding 2012-2050**



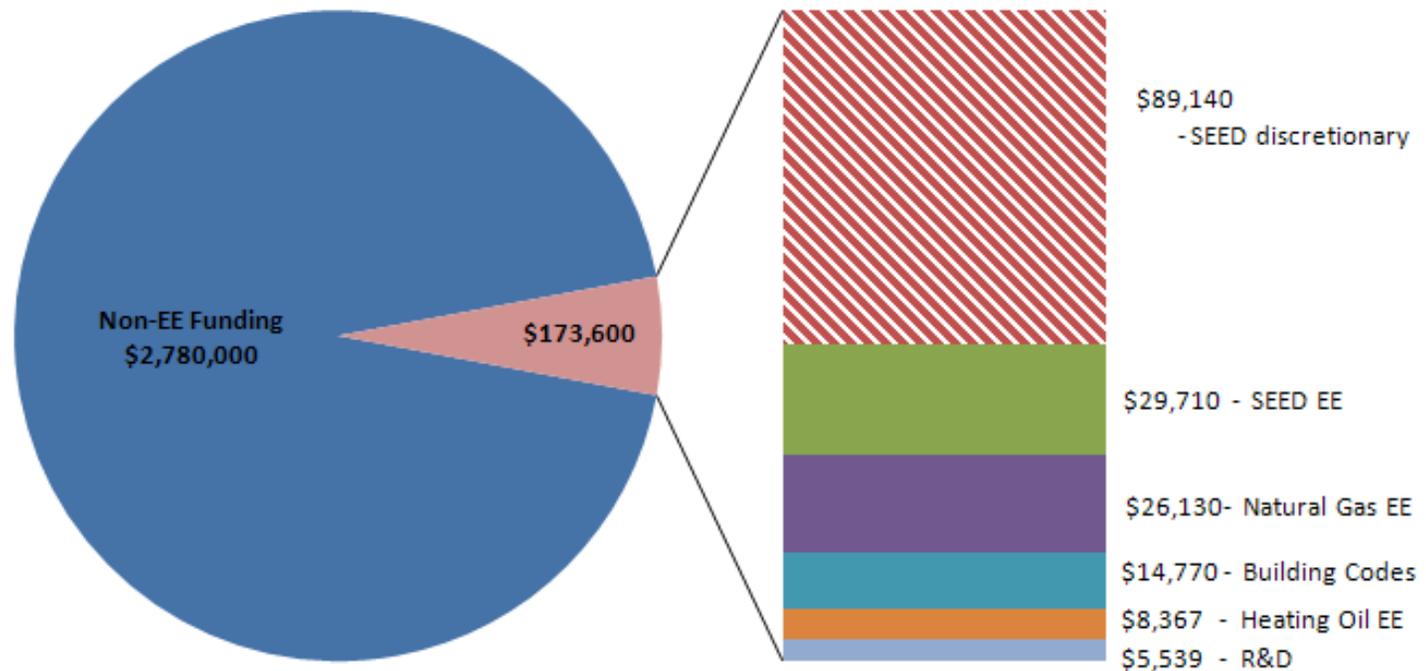
Alliance to Save Energy 2009



# Allowance Allocations by Program

## Cumulative Energy Efficiency Funding, 2012-2050

(Millions of 2005 U.S. Dollars)



Alliance to Save Energy, June 2009, Based on EPA, *Analysis of American Clean Energy and Security Act of 2009*, June 23, 2009

# Complementary EE Policies



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- **Buildings:**
  - Building codes
  - Building labels
  - Appliance standards + labels
  - Federal energy use + ESPCs
- **Utilities:**
  - Efficiency + renewable standard
  - Smart grid + transmission
- **Industry**
- **Transportation**
  - Vehicle emissions standards
  - Reducing driving through land use planning + transit

# Building Energy Codes: Development



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- Address split incentives, info, first cost, lock-in barriers
  - Slow, but long-lasting, savings
  - Carbon price justifies more stringent standards
- Energy savings targets
  - 30% beyond current model code ca. 2020
  - 50% beyond ca. 2030
- “Normal model code development
  - ICC and ASHRAE get first chance
- Federal backstop
  - DOE sets national code if they don’t meet targets
- \$ for compliance

# Utilities: Efficiency and Renewable Electricity Standard



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	Senate	House
Overall target	15% by 2021	20% by 2020
Efficiency portion	4% (0% new)	5-8% (~2% new)
Efficiency trading	Full	In-state by bilateral contract
Peak demand		Utilities to set separate goals
Natural gas		

- BAU efficiency likely to reach 5%
- Add'l EE funding source (?)
- Measuring compliance will be a challenge

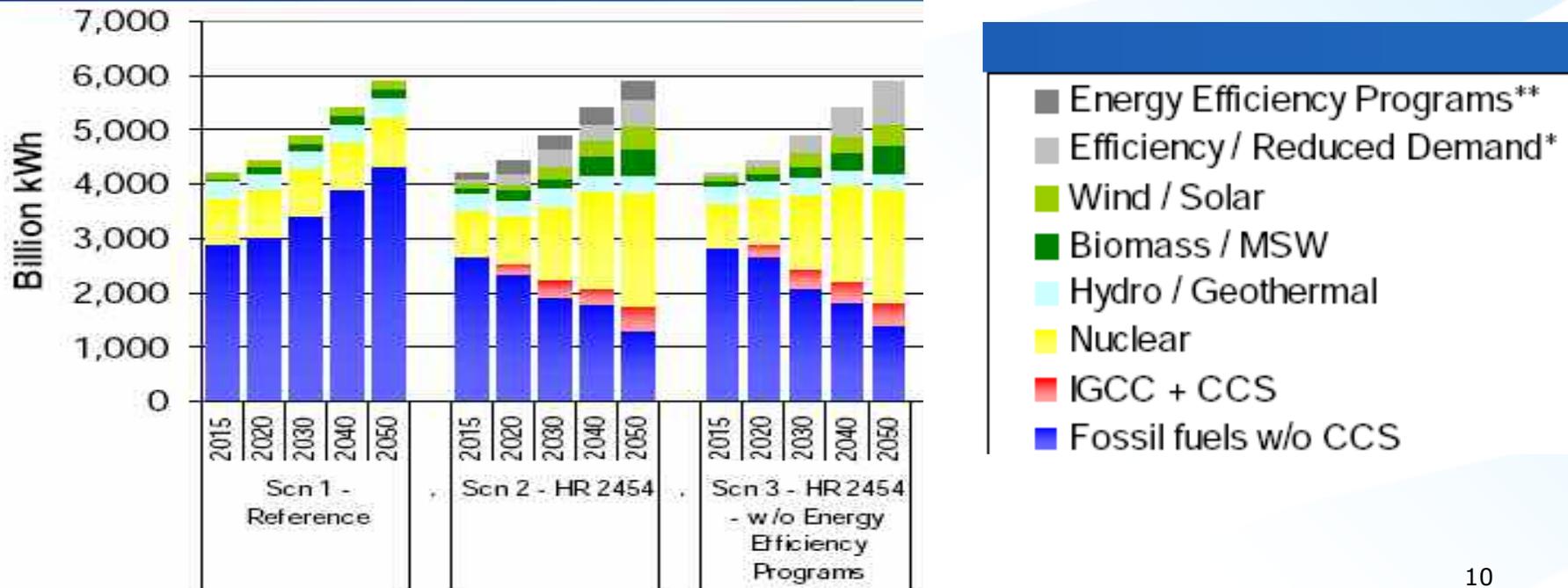
# Policy & Programs

## Impact on Electric Demand



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- More than 1/3 of 2030 demand reduction from EE policies & programs
- EE policies & programs impact small in 2050



Source: EPA Preliminary Analysis of the Waxman-Markey Discussion Draft, June 26, 2009, p.17

# Electric Utility Free Allowances



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- One third of allowances
  - Distribution based on CO2 emissions and kwh sales
- Will end-use consumer see a carbon price?
  - Allocation formula only partially linked to emissions and...
  - rebates cannot be “solely based” on electric consumption, but.....
  - if utilities simply surrender free allowances, could be perfect muting of price signal.

# A lot of offsets!

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- **Defined**

- Certified GHG reductions achieved outside the covered system can be submitted in lieu of normal allowances

- **Up to 2 billion tons annually**

- As much as two-thirds of submitted allowances in 2050

- **If real and additional**

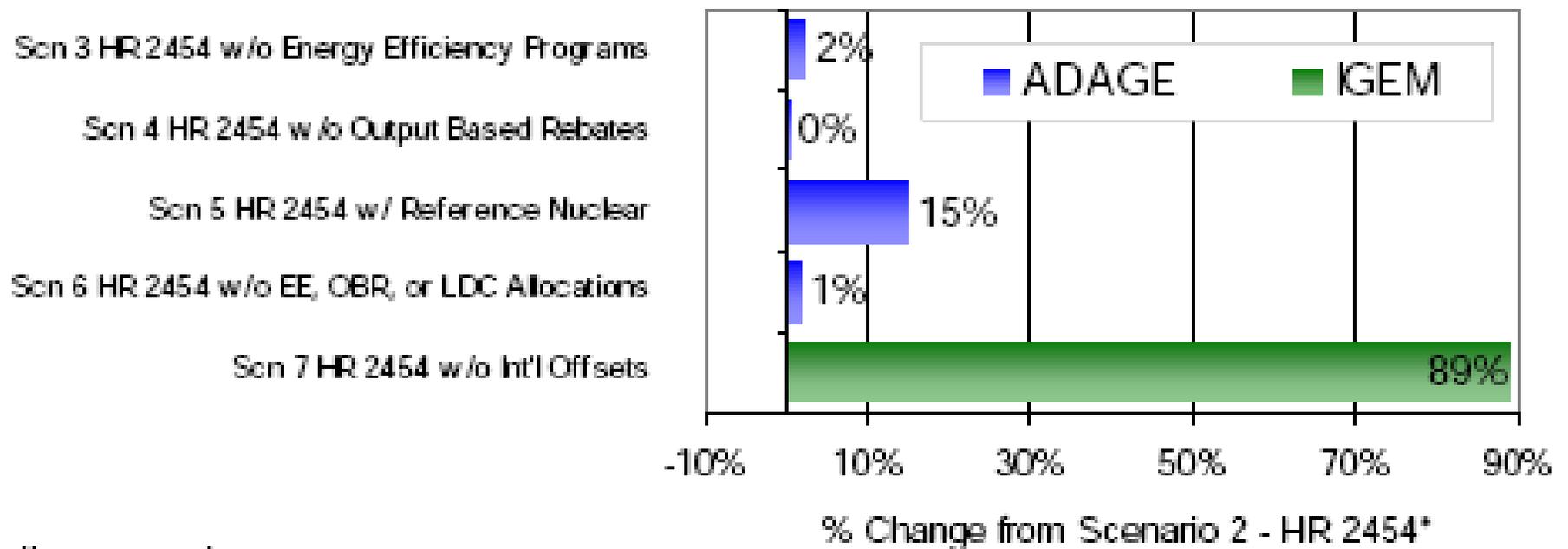
- Cuts marginal cost of abatement in half
- Helps developing countries reduce emissions

# Offsets THE cost control strategy



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## Marginal Cost of GHG Abatement Sensitivities



Source: EPA Analysis of American Clean Energy and Security Act of 2009, June 23, 2009, p.13

# Offset challenges



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- **If offsets are not real and additional**
  - Cap is undermined
  - Cost/ton reduction is higher, not lower
  - ACES addresses – EPA, advisory board, random audits
- **EE may not fare so well**
  - 1/5 of CDM credits are EE
  - 90% of EE credits are power gen
- **Discourage other countries' policies?**
  - BAU policies reduce “additional” potential
  - ACES addresses -- int'l clean energy fund, sectoral offsets, int'l reserve allowances

# Conclusions

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- A lot of good policy in ACES
  - Significant GHG reductions
  - Addresses EE market barriers
  - At least cognizant of key issues
    - (e.g., offset quality)
- Our to-do list
  - Defend EE funding and code provisions
  - Strengthen RES
  - Ensure offset quality and address perverse incentives
  - Ensure end-use price signal



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