

# Role of Energy Efficiency in Local, State and National Climate/Energy Policy

NCSL Climate Policy Briefing  
July 20, 2009

The Center for Climate Strategies

1899 L Street, NW, Washington, DC 20036

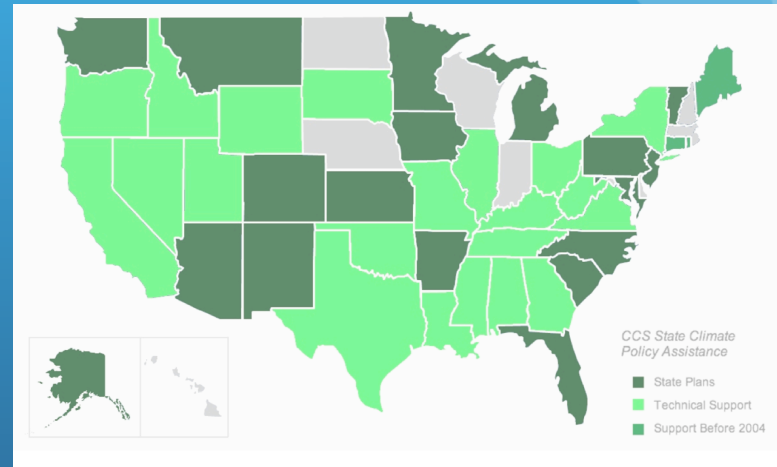
[www.climatestrategies.us](http://www.climatestrategies.us), (202) 540-9121

# Center for Climate Strategies

## Leading Catalyst

- Non-partisan, Non-advocacy, Non-profit, Partnership Group Since 2004
- National leader on policy development, analysis and consensus building
- 20 state climate plans, 4 regions, assistance to 42 states
- HQs in Washington, DC, team across U.S., Mexico, Canada

## Policy Advancement



# Importance of State Initiatives

## Value Added

- Inform and prepare for international, federal, state and local policy
- Mobilize and target investment
- Integrate and achieve climate, energy, economic, environmental policy goals
- Identify best actions and instruments
- Galvanize private sector actions
- Establish proactive capability, fact base, stakeholder support

## Global Significance

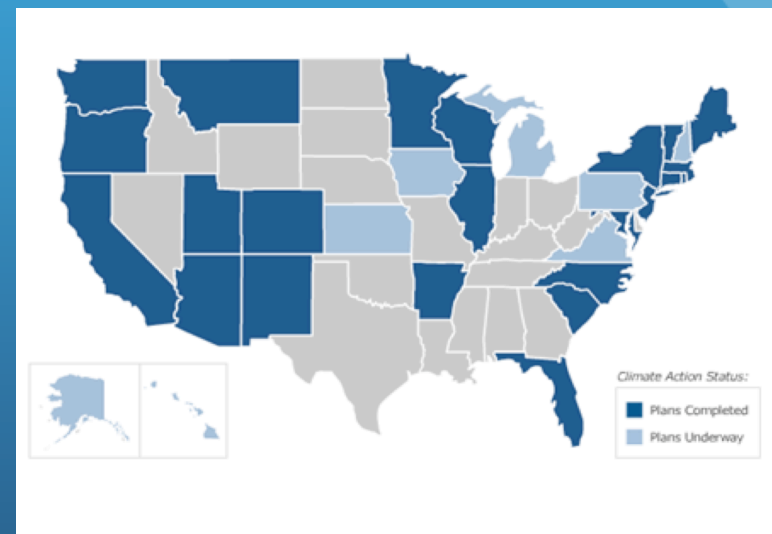


# State Climate Actions

## Full Roundup

- 31 climate action plans completed or in progress
  - Cover 2/3 of US economy and population
  - Cover 1/2 of US GHG emissions
- Three regional cap and trade initiatives (RGGI, WCI, MGA)
- 40 states in the Climate Registry, most with goals and reporting systems
- Many sector specific programs and reduction commitments underway

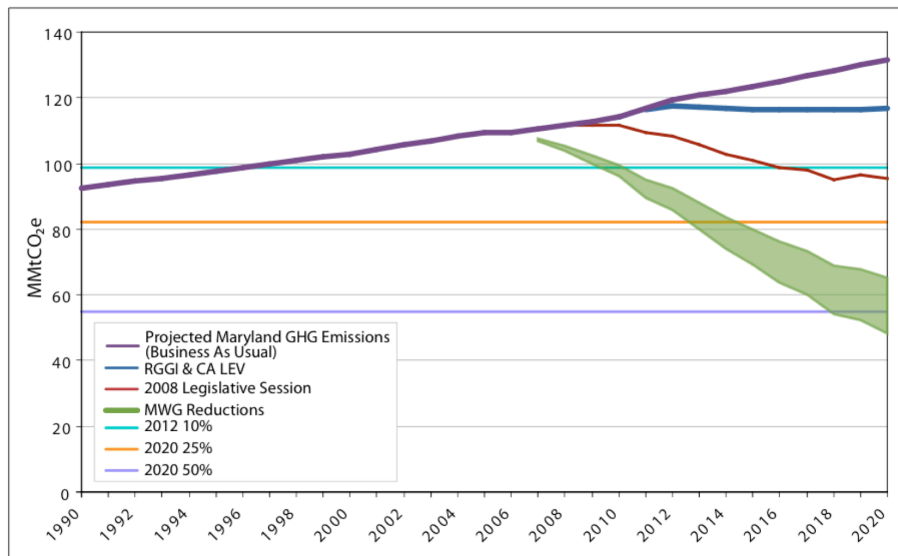
## State Plans



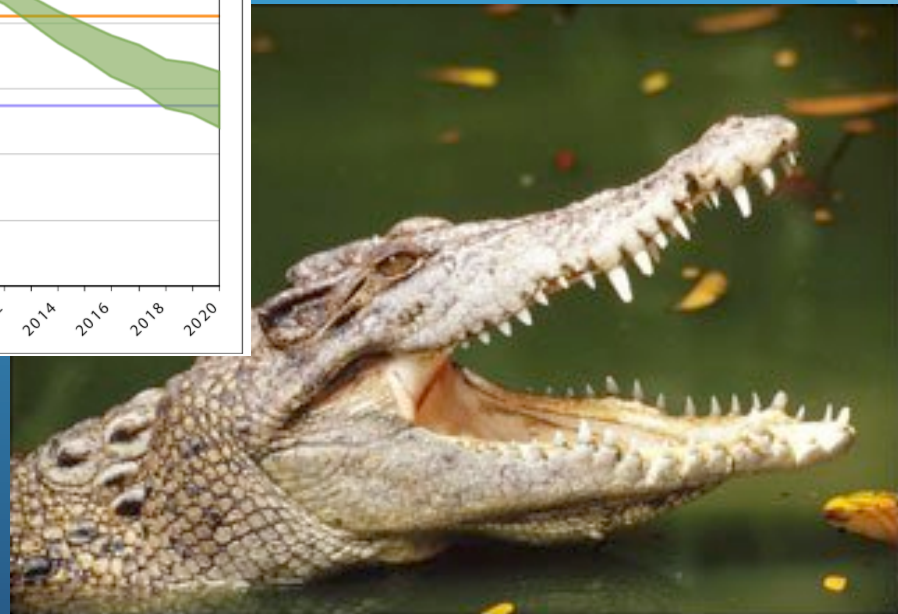


# Solutions Through Action

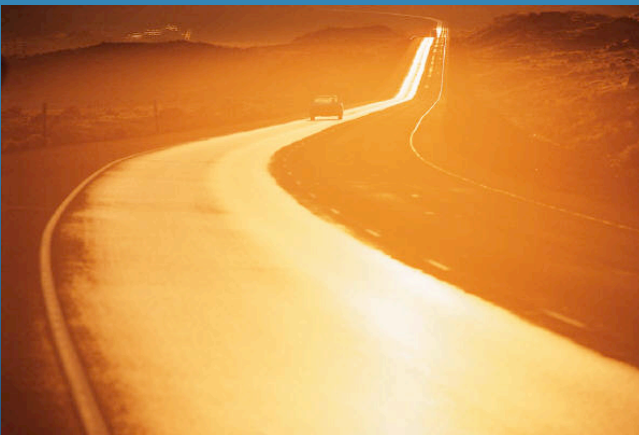
GHG Reduction Potential from Maryland's Recent and Proposed Actions



1. Emissions baseline and forecast
2. Recent and planned actions
3. New policy actions, goals



# Coverage of Climate Action Plans



- All GHG's
- All Economic Sectors
- All Implementation Mechanisms
- Local, State, Federal Levels
- Short- and Long-Term Actions
- GHG Sources and Sinks
- Co-benefits
- Decisions made by Stakeholders

# Economic Sectors Covered

## Sectors

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- Residential, Commercial, Industrial (RCI)
- Energy Supply (ES)
- Transportation & Land Use (TLU)
- Agriculture, Forestry & Waste (AFW)
- Cross-Cutting Policies and Other Issues (CC)

## Policy Examples

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- Energy Efficiency & Conservation, Process Improvements
- Renewable Energy, Combined Heat & Power; Advanced & Low-Emitting Generation
- Vehicle & Location Efficiency, Low Carbon Fuels
- Land Protection, Renewable Energy, Conservation Practices
- Public Education and Outreach

# Why is EE So Important?

## Questions

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1. National role and importance
2. Most effective policy actions and instruments, and levels
3. Economic performance
4. Co-benefits
5. Feasibility issues
6. Stakeholder and public support

## Responses

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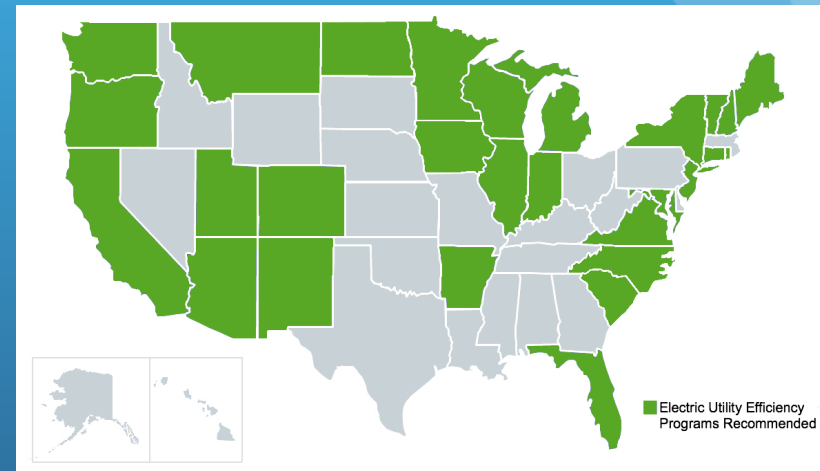
- Building stock to double in 15 years
- 29% of national GHG reduction potential, 12 percent U.S. GHGs
- 95% of options provide net financial and energy savings
- Key driver of economic recovery, cost containment, energy security & reliability, public health
- Market barriers, investments, institutional reform
- Over 90% consensus on actions

# State Energy Efficiency Programs

## Key Features

- State plans recommend:
  - Demand-Side Management
  - High-Performance Buildings
  - Improved Building Codes
  - Appliance Standards
  - Combined Heat & Power
  - Distributed Renewable Generation

## National Coverage



# Key Policy Design Issues

- Magnitude of GHG and energy reductions
- Cost (or savings) of undertaking actions
- Distribution of costs and benefits
- Job, Income, Economic Growth, Consumer impacts
- Co-benefits
- Feasibility

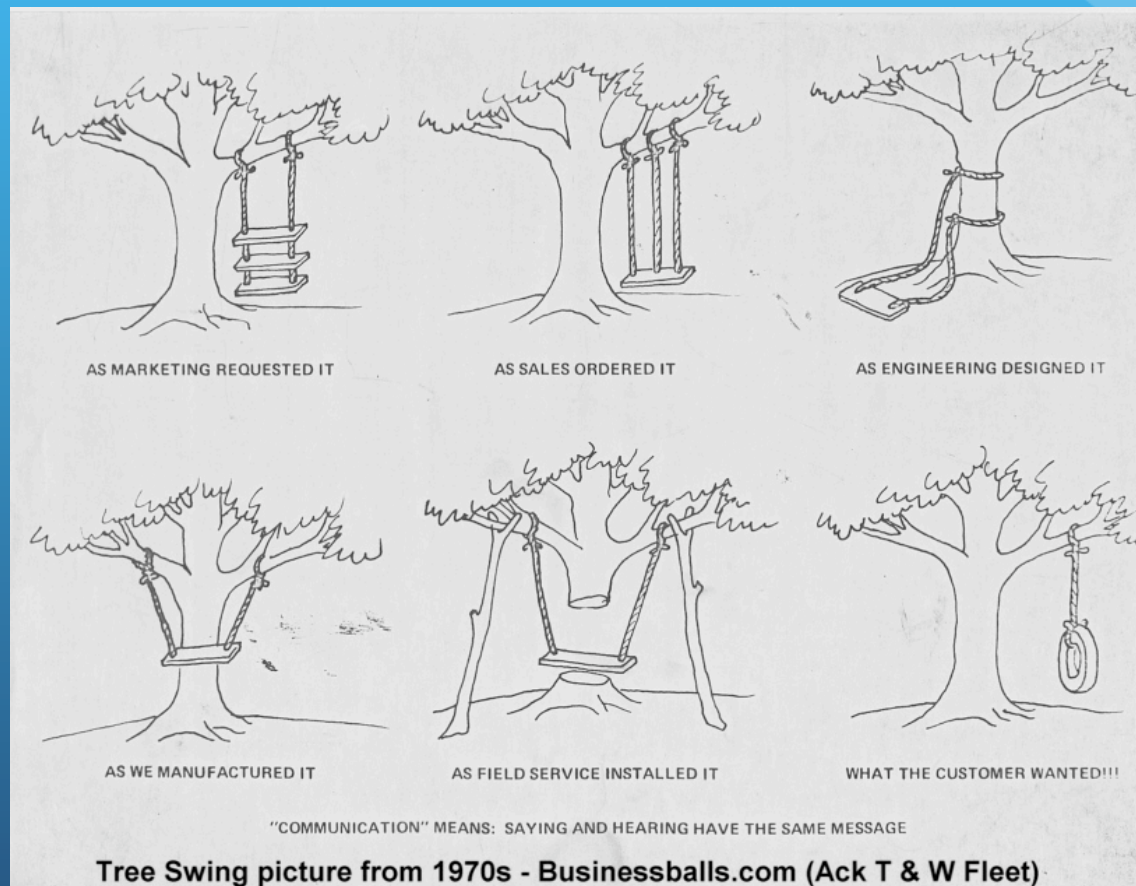


# Comprehensive Planning

1. Identify full range of existing policy actions and choices
2. Conduct gap analysis, innovate and expand range of choices
3. Narrow list for further analysis and development
4. Formulate draft policy specifications and tools
5. Formulate draft analytical approaches for analysis of GHG reductions and costs (best data, assumptions, methods)
6. Conduct preliminary analysis, iterate to final agreements for individual policies
7. Conduct analysis of co-benefits, feasibility as needed
8. Conduct aggregate impact analysis of full set of policies
9. Iterate to final agreement on policy recommendations and overall goals
10. Issue final report and recommendations



# The Role of Collaboration





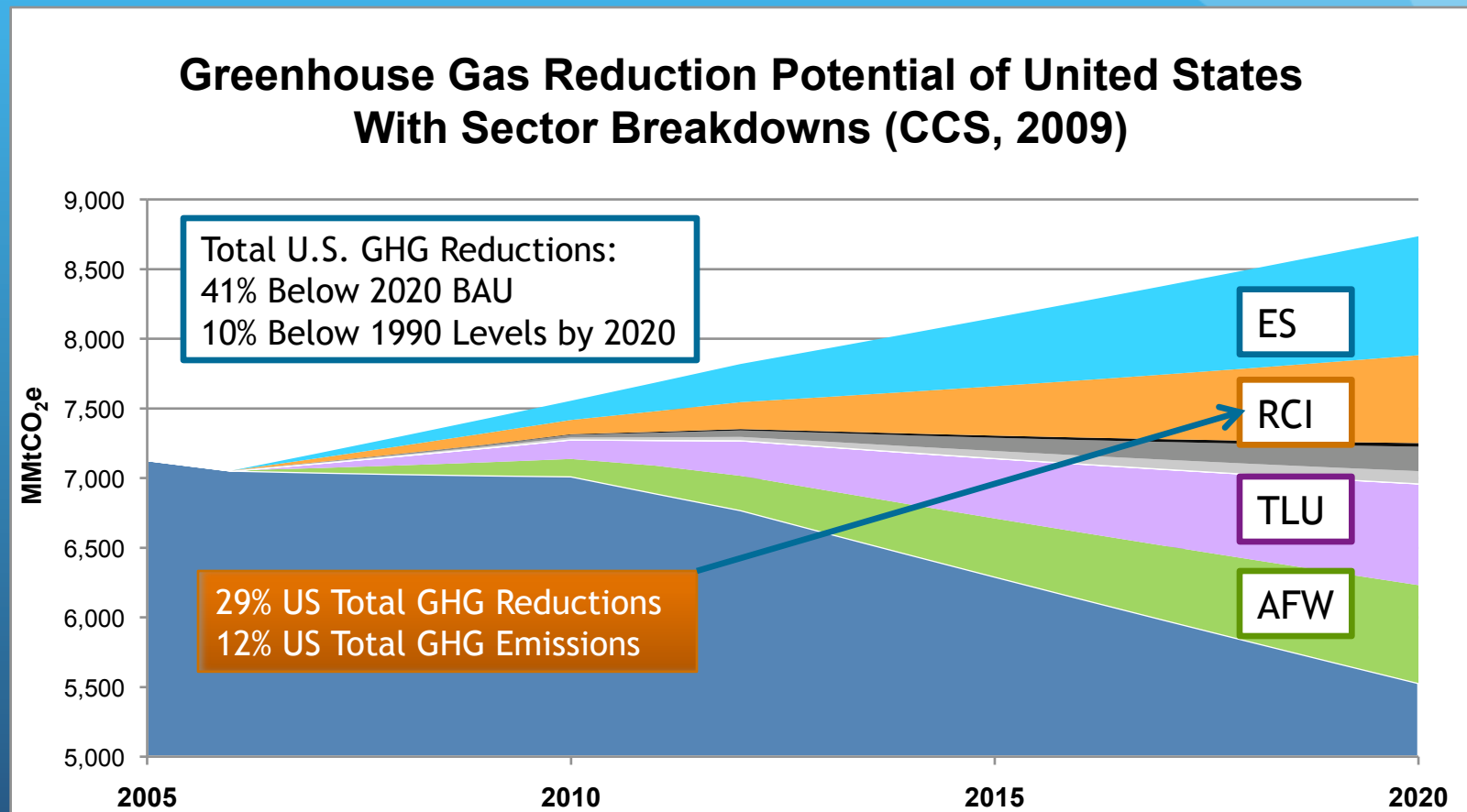
# Planning Standards - Mitigation

- Mitigation
  - Inventory and forecast of GHG emissions
  - Inventory and results of recent and planned actions
  - Numerical targets and timetables for GHG reductions
  - Quantified portfolio of specific actions to attain goals
    - GHG reductions and cost effectiveness, macro economic impacts
    - Co-benefits assessments
    - Feasibility analysis
    - Public participation and consensus
  - Implementation programs and instruments
  - Monitoring and reporting

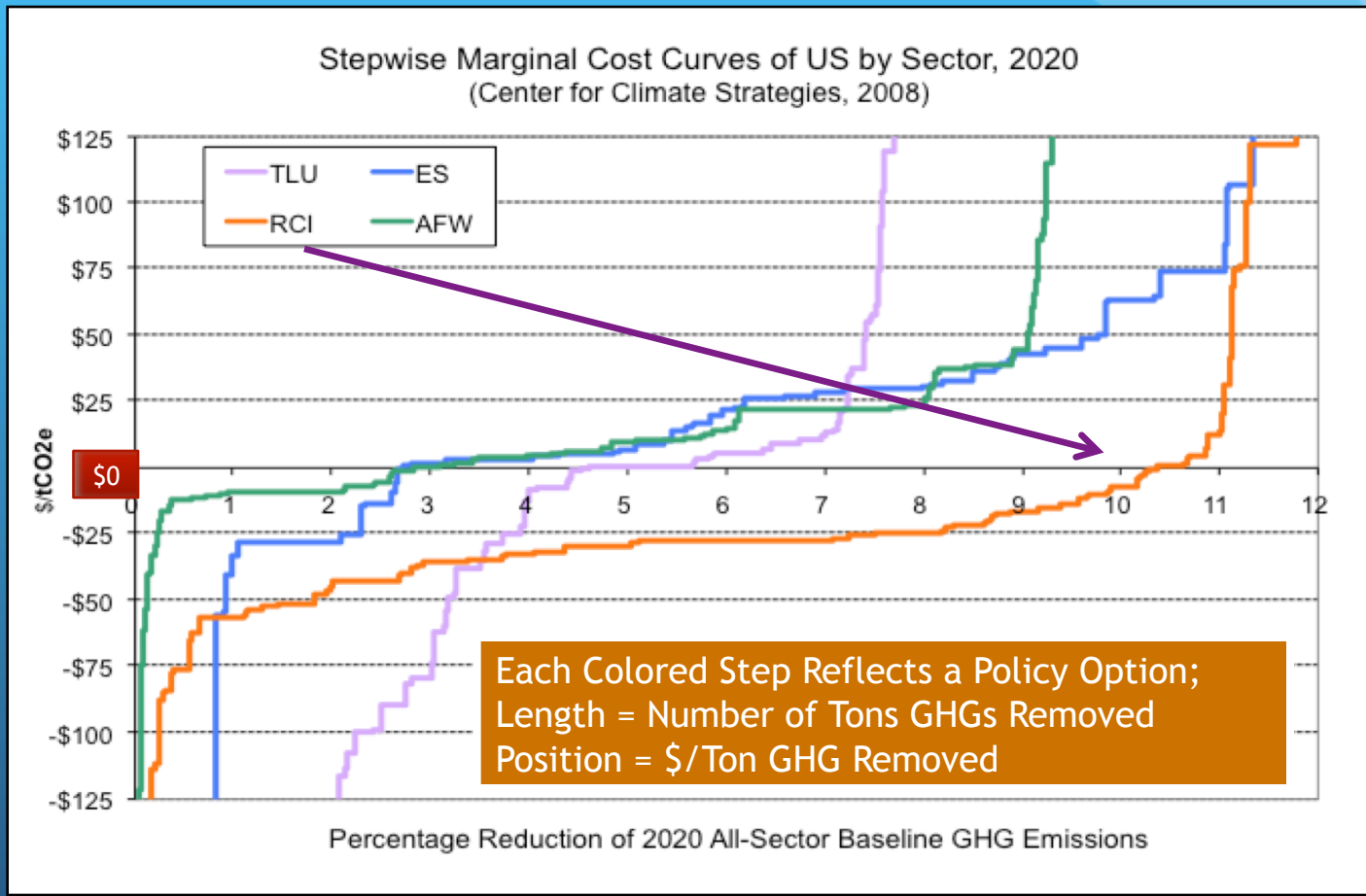
# Economic Importance of EE in U.S.

Potential US 2020	% National GHG Plan Reductions	MMTCO <sub>2</sub> e	\$ per Ton GHG Removed	Total below BAU 2020
Energy Efficiency and Conservation (RCI)	29%	1035	-\$13/ton	12%
Clean and Renewable Energy (ES)	29%	1020	\$6/ton	12%
Transportation and Land Use Efficiency (TLU)	16%	575	\$13/ton	6%
Agriculture and Forestry Conservation, Waste Management (AFW)	26%	933	\$8/ton	11%
Total/Average	100%	3563	\$3/ton	41%

# Sector Based Climate Actions

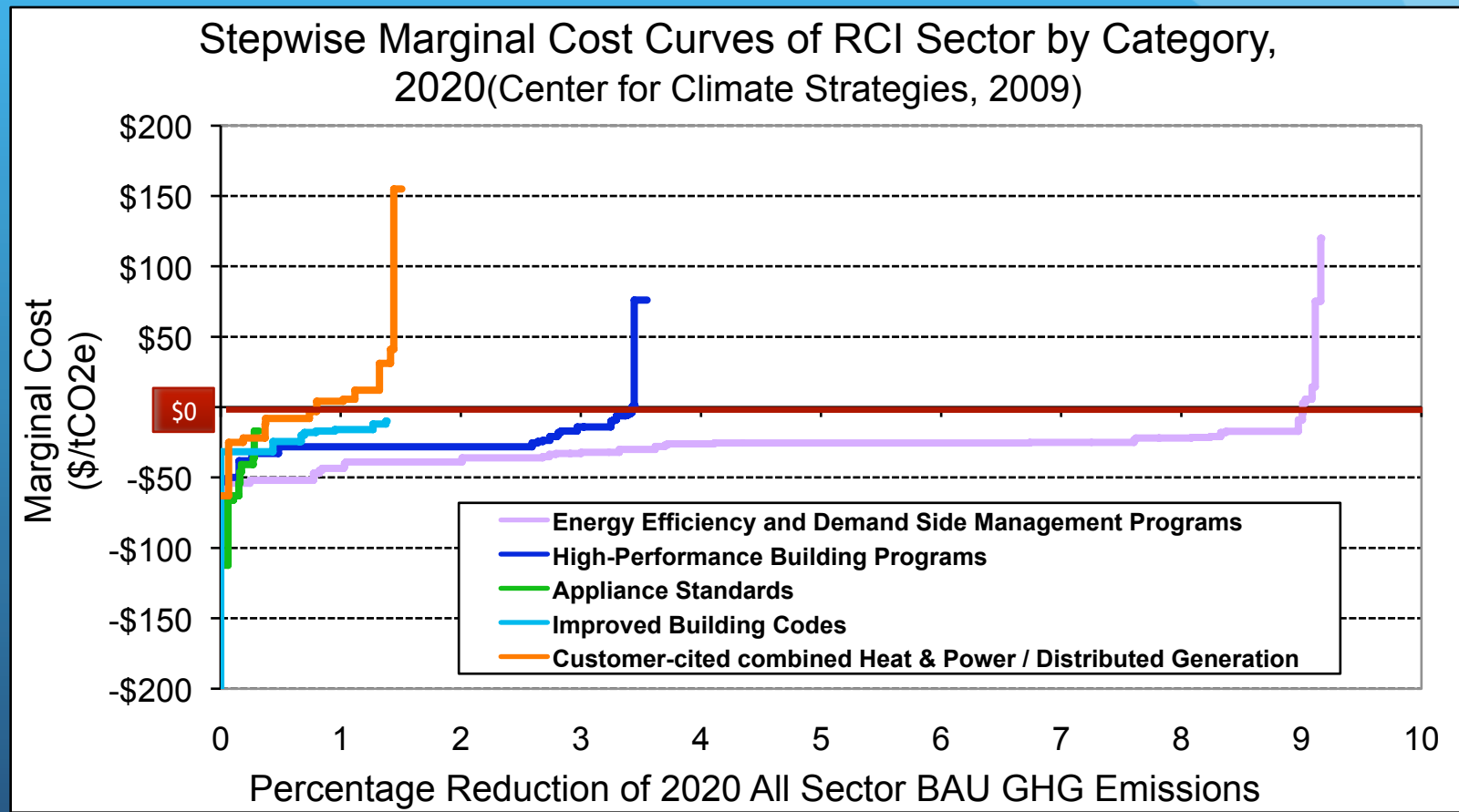


# 20-State Climate Plan Results

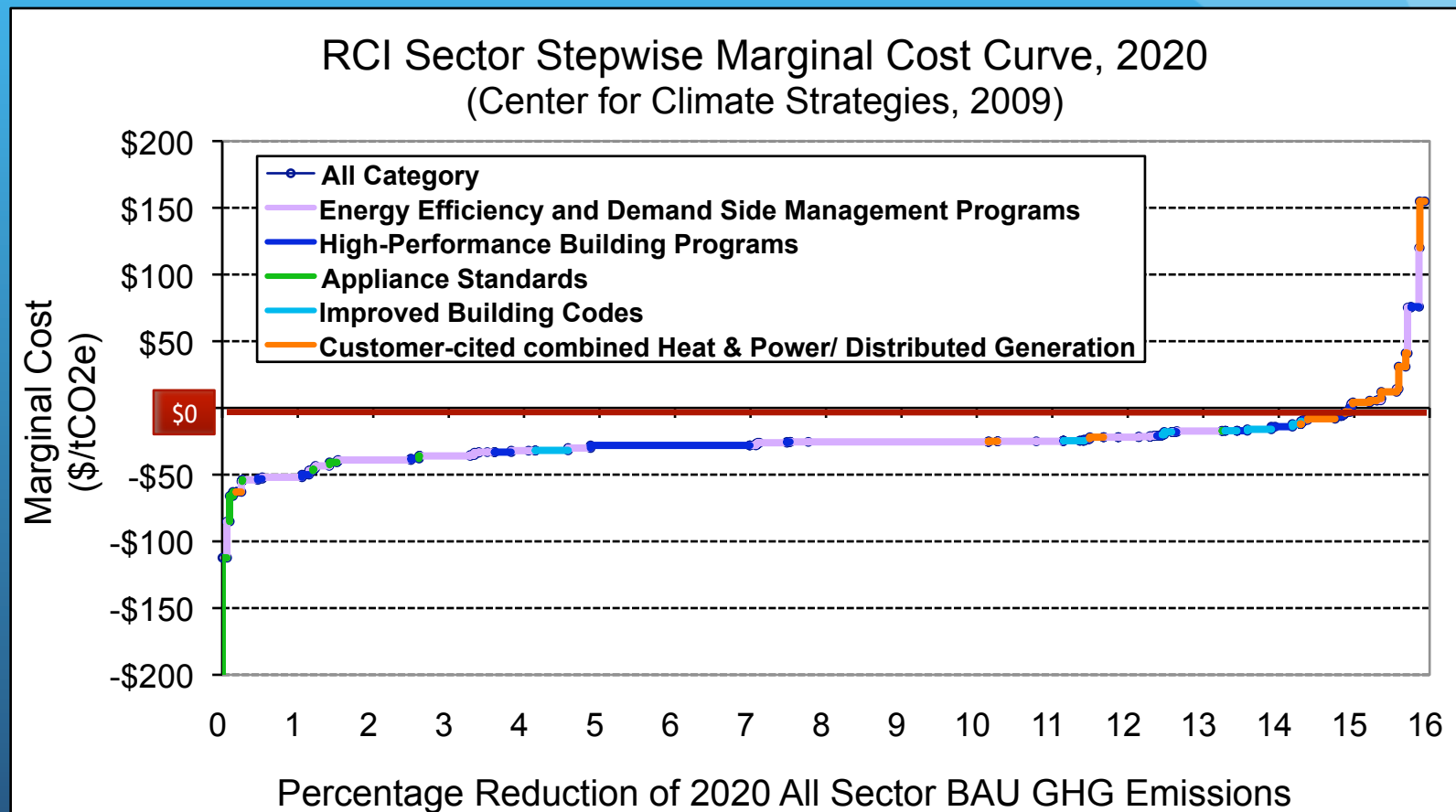


Analysis by CCS, 2009

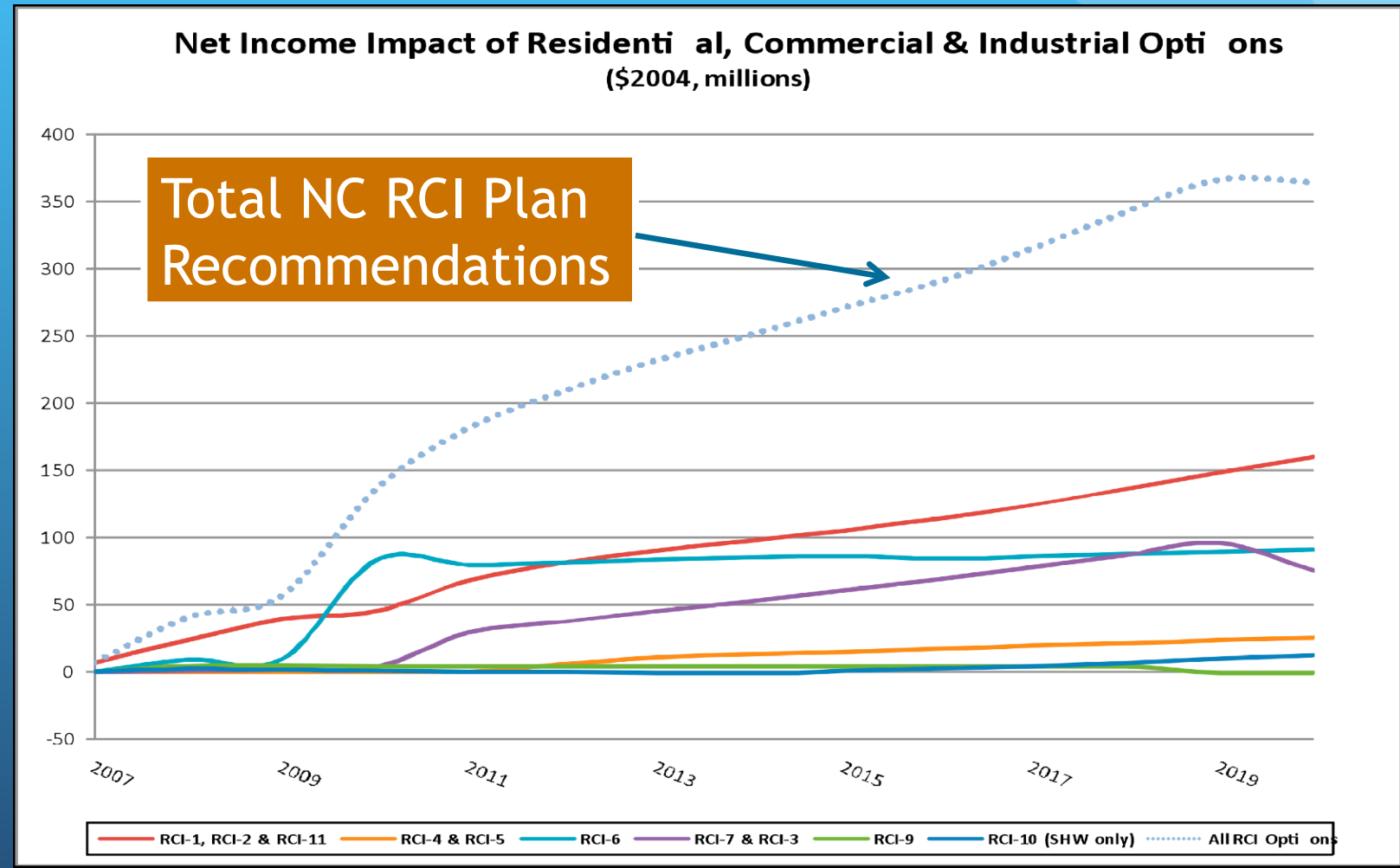
# Energy Efficiency Policy Options



# Energy Efficiency Policy Options



# North Carolina: Net Income Gains



# Florida EE Jobs and GSP

#	Policy Actions	MMTCO <sub>2</sub> e	\$NPV	\$/Ton MMTCO <sub>2</sub> e	\$GSP Millions 2020	Job Gains Thousands
ESD-12	Demand-Side Management (DSM)/Energy Efficiency Programs, Funds, or Goals for Electricity	201.4	-\$8,566	-\$43	\$2.40	8,660
ESD-13a	Energy Efficiency in Existing Residential Buildings	50.4	-\$1,432	-\$28	\$3.08	10,920

Policies behind these numbers include:

- Demand-Side Management
- Improved New Building Codes
- EE in Existing Residential Buildings
- Power Plant EE Improvements
- Training for professionals; consumers



# Provides Climate Policy Portfolio

Residential, Commercial, Industrial Energy Use	Cap & Trade	Policies & Measures	Local	State	Federal
<u>Price Incentives</u>	Price Signals, Revenues				X
<u>Non Price &amp; Price Instruments</u>		Barrier Removal, Program Support			
<i>Utility Demand Side Management</i>			X	X	X
<i>High- Performance Buildings</i>			X	X	X
<i>Appliance Standards</i>				X	X
<i>Improved Building Codes</i>			X	X	X
<i>Combined Heat &amp; Power</i>			X	X	X
<i>Distributed Renewable Generation</i>			X	X	X

# Ready for Immediate Deployment

RCI Policy Action	Federal Programs	State Programs
<p>Non-Utility Incentives and Funds To Promote Renewable Energy and Energy Efficiency:</p> <p>1. Demand-Side Management (DSM)</p> <p>2. Energy Efficiency Programs for Electricity, Natural Gas, Propane, and Fuel Oil</p>	<ol style="list-style-type: none"> <li>1. Federal Weatherization Program</li> <li>2. Energy Star Qualified Manufactured Homes</li> <li>3. DOE's Weatherization Assistance program Climate Challenge Program</li> <li>4. Low-Income Home Energy Assistance Program (LIHEAP)</li> </ol>	<ol style="list-style-type: none"> <li>1. Arkansas Weatherization Program</li> <li>2. State of Washington Treasurer's Program COP and LOCAL loan program</li> <li>3. OR's Business Energy Tax Credit (BETC) program</li> <li>4. SC Business Tax Credit</li> <li>5. NW Energy Efficiency Alliance</li> <li>6. State Energy Office grants</li> <li>7. MPCA grants and loans</li> <li>8. MnTAP</li> <li>9. MnDOC Conservation Improvement Program (CIP)</li> <li>10. CA Energy Commission PIER program</li> <li>11. CA Solar Electric Incentives programs</li> <li>12. NC Public Benefits Charge program</li> <li>13. The EmPOWER Maryland goal</li> <li>14. ME PUC's Carbon Free Homes Program</li> <li>15. ME State Energy Programs</li> <li>16. UT Weatherization Assistance Program</li> <li>17. Alaska Weatherization Program (Bonding)</li> </ol>

# EE Economic Recovery Rankings

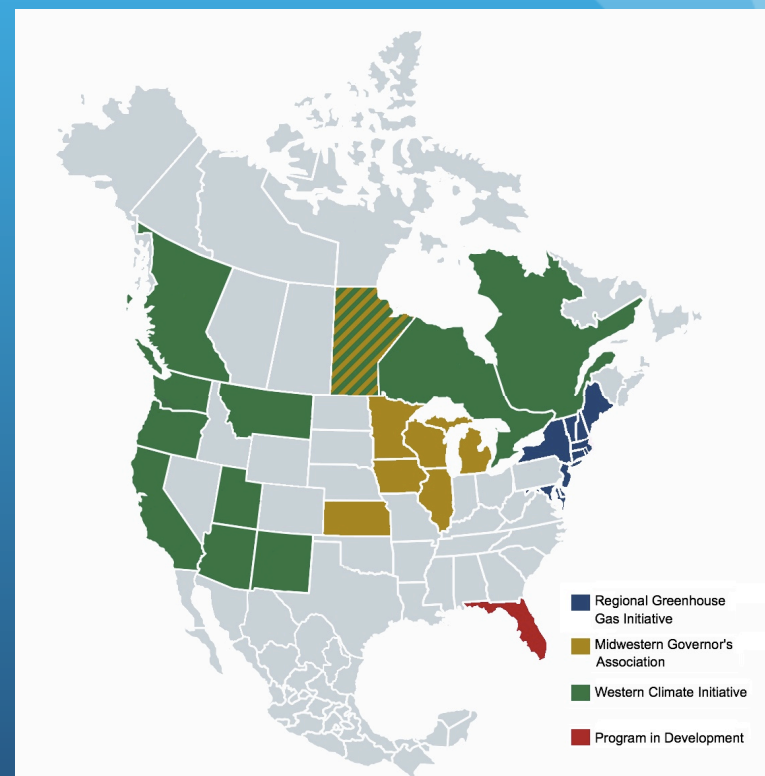
#	Policy Category	GHG	\$/Ton	Speed	Leveraging	Jobs	Program
RCI-1	Non-Utility Incentives and Funds To Promote Renewable Energy and Energy Efficiency Including Demand-Side Management (DSM) Energy Efficiency Programs for Electricity, Natural Gas, Propane, and Fuel Oil	M	M	F	H	H	grant, tax incentive
RCI-2	Energy Efficiency Improvement in Existing Buildings, with Emphasis on Building Operations	M	H	F	H	H	grant

# Cap and Trade

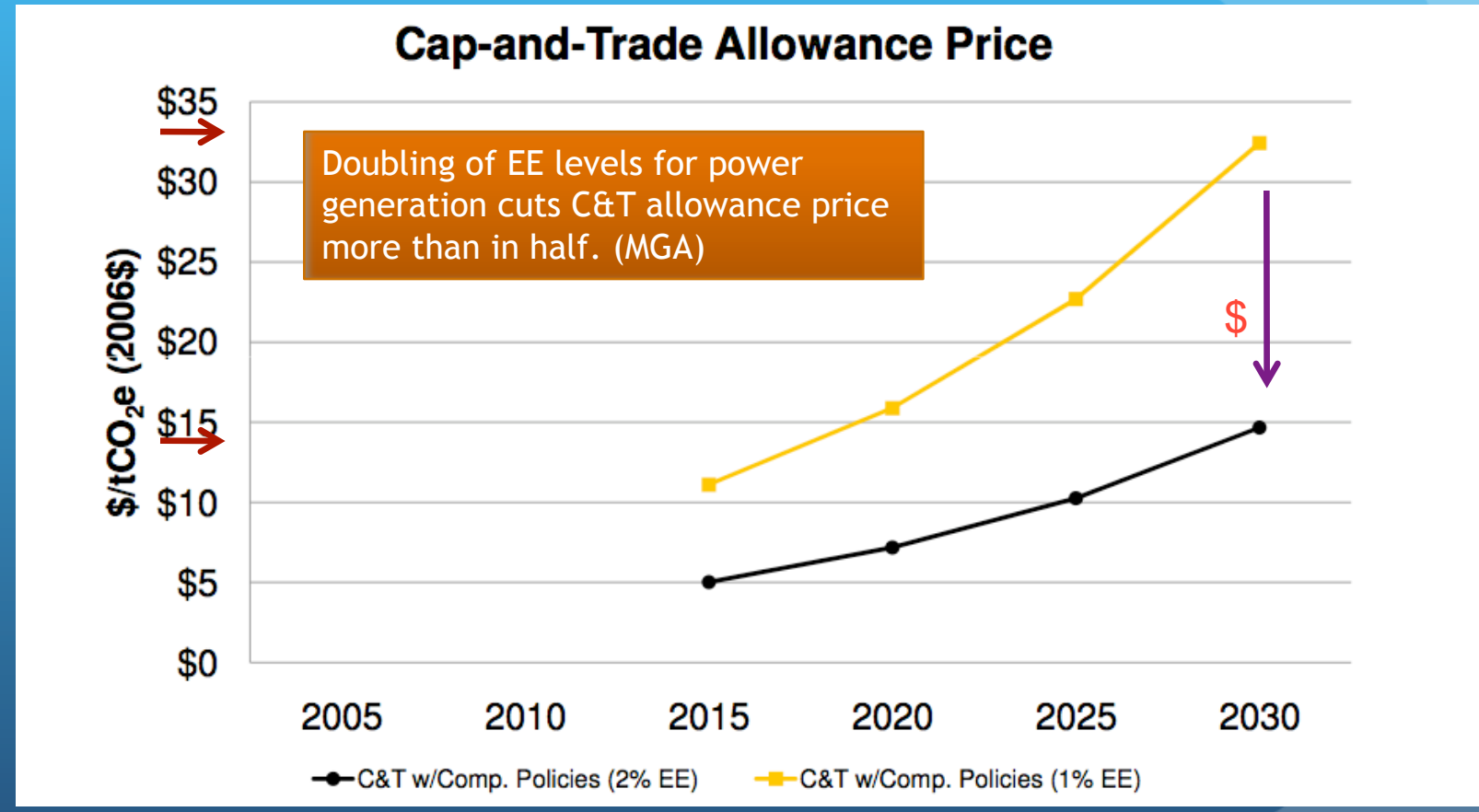
## RCI Role

- Reduce demand for C&T allowances
- Reduce and control target attainment costs
- Remove non price market barriers
- Integrate supply and demand side programs
- Recycle auction revenues

## Regional Programs



# EE Vital to Cap-&-Trade Success



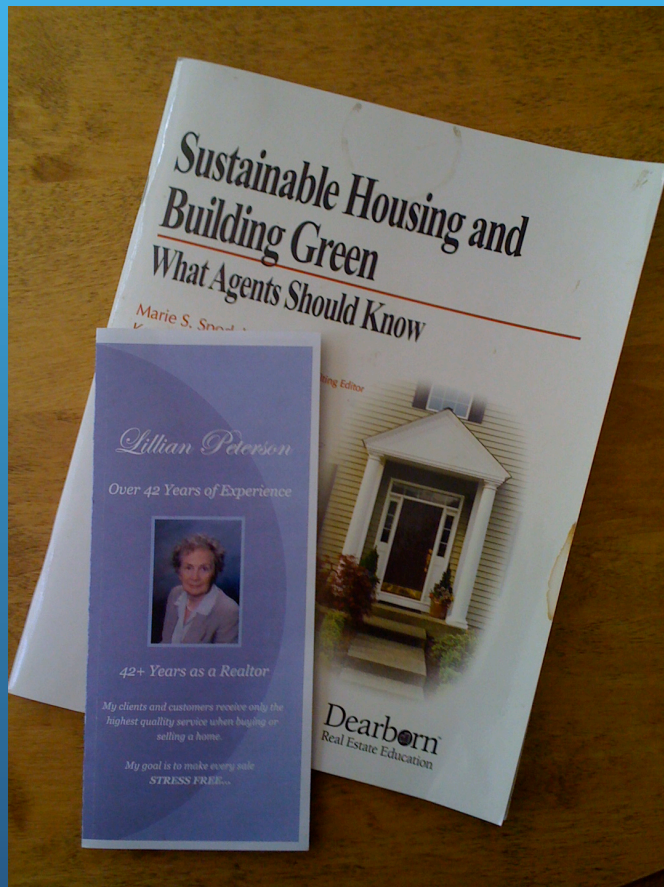
# Key Opportunities

- “Build it Right” and expand markets
- Protect consumers with energy, cost saving choices
- Target investments, maximize returns
- Target and ensure economic recovery
- Integrate energy policy, climate mitigation and adaptation





# Mom and Apple Pie



# Comprehensive Climate Policy

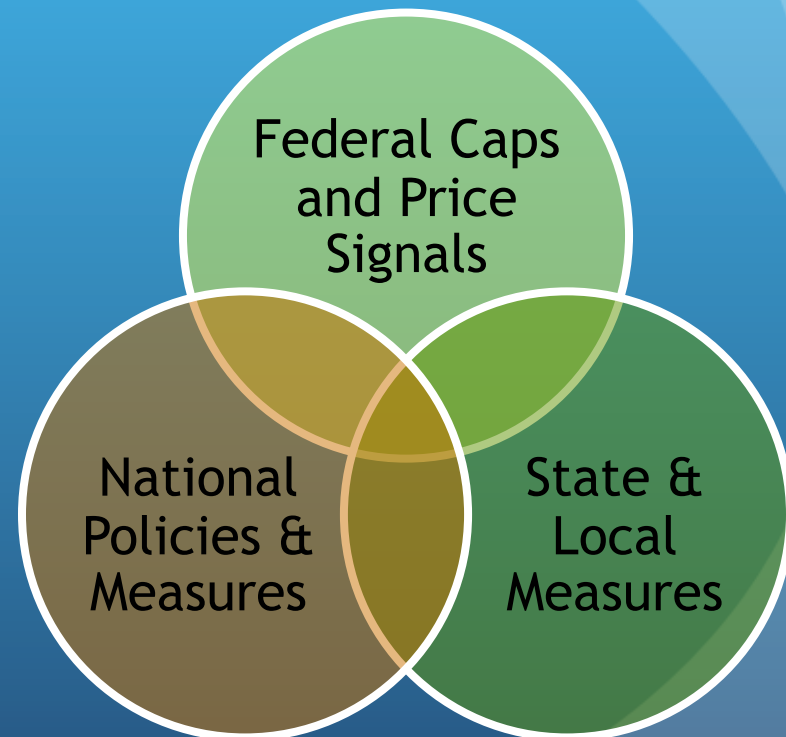
## Needs

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- Achieve GHG Targets
- Minimize costs
- Maximize savings
- Maximize co-benefits
- Maximize consensus
- Address governance
- Maximize implementation

## Solutions

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Thank you for your time and  
attention!