

# Governor's Commission on Climate Change

COVES Conference

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Nikki Rovner, Deputy Secretary of Natural Resources



# Chronology

July 1, 2006	Effective date of SB 262, which established <i>an</i> energy policy for the Commonwealth and directed DMME to prepare a 10-year Virginia Energy Plan (VEP)
April 5, 2007	Governor Kaine issued E.O. 48, establishing energy efficiency standards for state government, the position of Senior Advisor to the Governor for Energy Policy and the Governor's Energy Advisory Council
September 12, 2007	VEP released. Contained 4 broad goals, one of which was to reduce GHG emissions by 30 percent by 2025. Also recommended the creation of a Commission Climate Change to develop a plan for reaching the goal
December 21, 2007	Governor Kaine issued Executive Order 59, which established the Governor's Commission on Climate Change



# Executive Order 59

- Commission is chaired by Secretary of Natural Resources Preston Bryant
- Ex officio members include the Secretaries of Commerce and Trade, Transportation, and Energy Policy Advisor
- 1 year to complete work
- Report due December 15, 2008



# Commission Work Plan

- 8 meetings held in Richmond and at universities around the Commonwealth
  - 7 held to date
  - Presentations from over 35 state and national experts
- Each meeting includes
  - a commission roundtable
  - a public comment period



# E.O. 59: Charge to Commission

Prepare a Climate Change Action Plan that will:

1. Inventory the amount of and contributors to Virginia's greenhouse gas emissions, and projections through 2025,
2. Evaluate expected impacts of climate change on Virginia's natural resources, the health of its citizens, and the economy, including the industries of agriculture, forestry, tourism, and insurance,

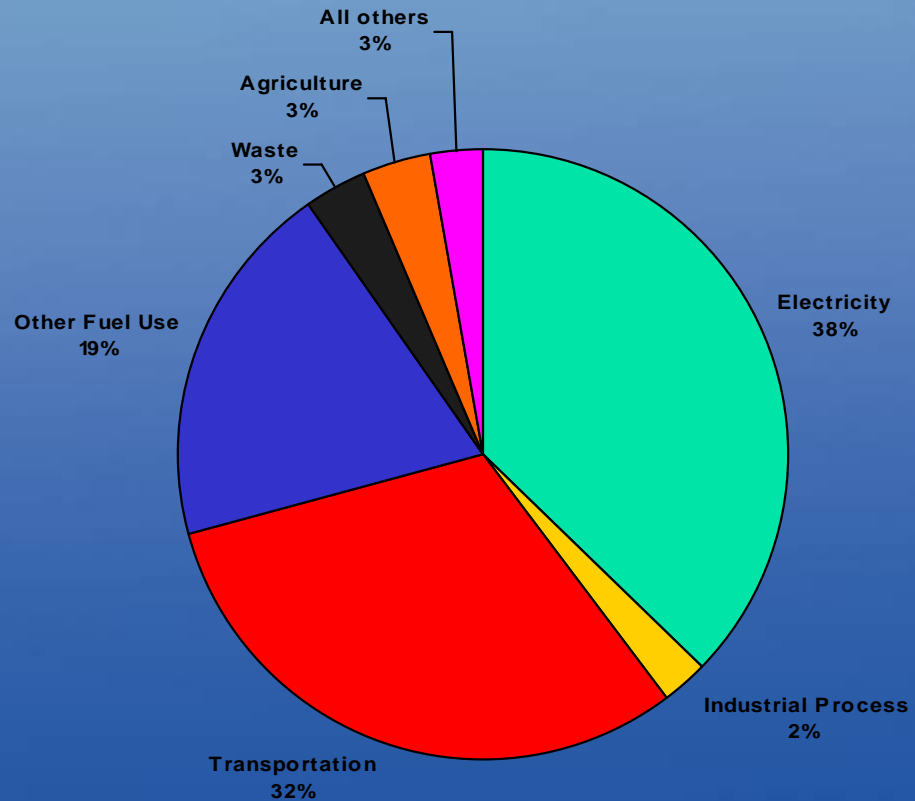


# E.O. 59: Charge to Commission

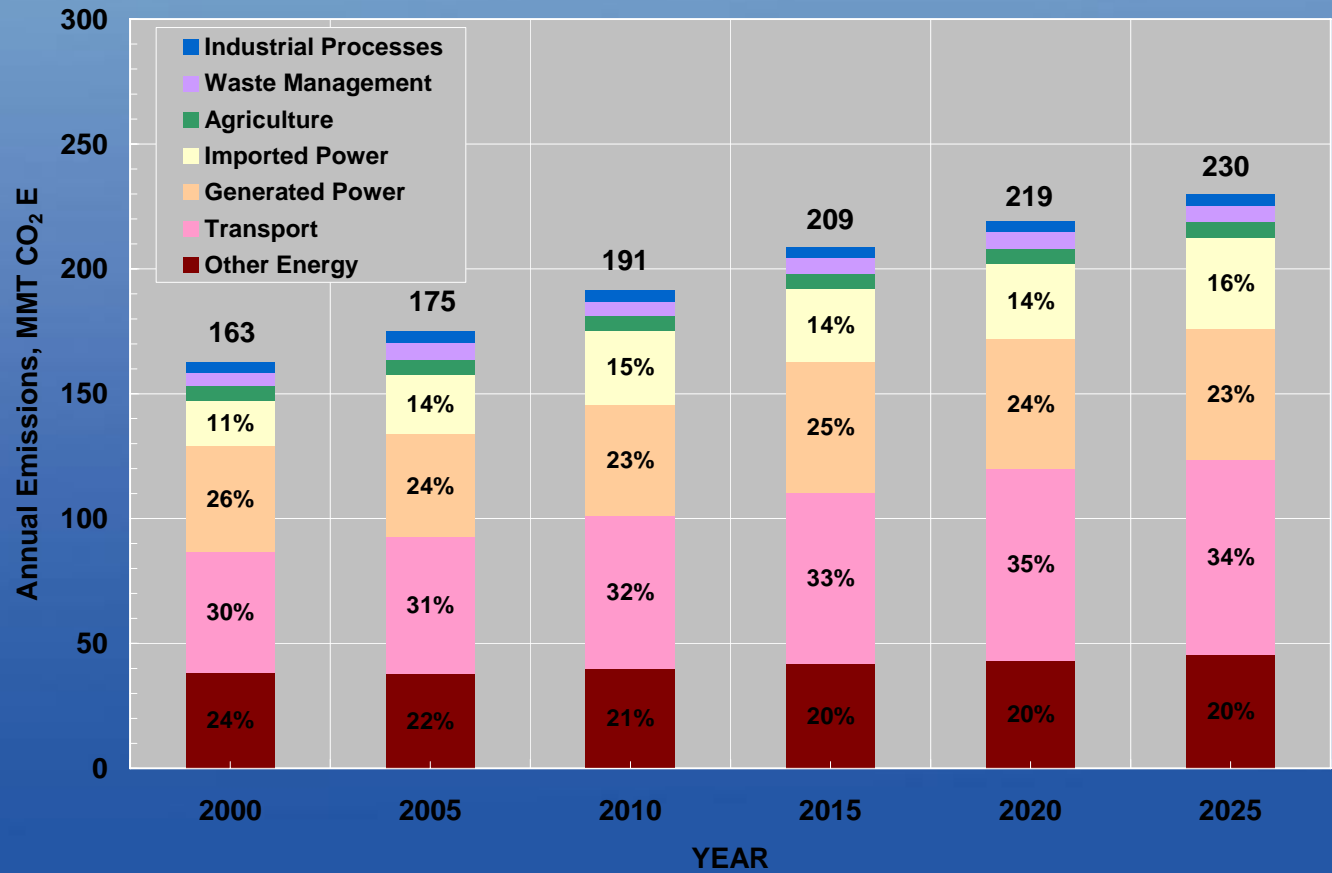
3. Identify what Virginia needs to do to prepare for the likely consequences of climate change,
4. Identify the actions (beyond those identified in the Energy Plan) that need to be taken to achieve the 30% reduction goal, and
5. Identify climate change approaches being pursued by other states, regions and the federal government.



# 1. Inventory



# 1. Inventory



## 2. Impacts - Weather

- Temperature increases by  $\sim 3^{\circ}\text{C}$
- Precipitation increases 0-10%
- More extreme weather patterns (storms, droughts, heat waves, hurricanes)
- Sea level rise in Chesapeake Bay Region: 0.7-1.6m (2.3-5.2 feet) higher by 2100



# 2. Impacts – Ecosystems

## Chesapeake Bay

- Water temperature increases
- Water oxygen levels decrease
- Salinity increases
- Acidification of water
- Increased nutrient input from land
- Rising sea levels
  - Erosion occurs
  - Wetlands are lost if they can't migrate

## Terrestrial

- Shrinking habitats will cause extirpations and extinctions
- Other threats (pollution, invasive species) will be exacerbated and will complicate conservation efforts



## 2. Impacts - Economy

- Forestry sector significantly changed; more research on this and effects on agriculture needed
- Infrastructure and military installations at risk due to sea level rise and storm surge
- Availability and affordability of insurance affected by uncertainty and higher risk of catastrophic losses from storms
- Movement toward a GHG emission-constrained economy also represents an opportunity for researchers, inventors, and investors to accelerate and deploy technologies in the areas of energy efficiency, indigenous renewable and low-emission energy as well as carbon capture and storage.

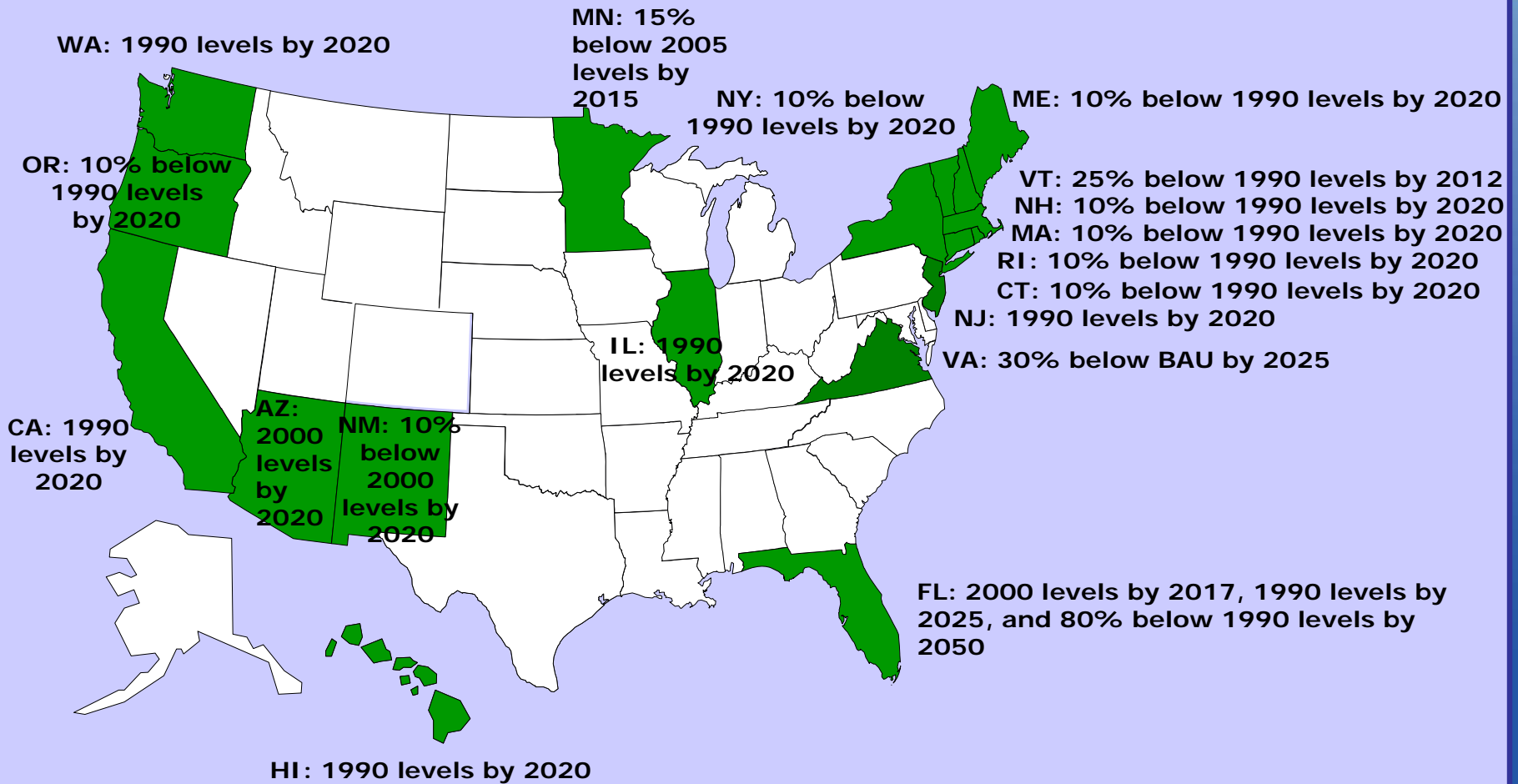


## 5. State, Regional, & Federal (and Local) Approaches

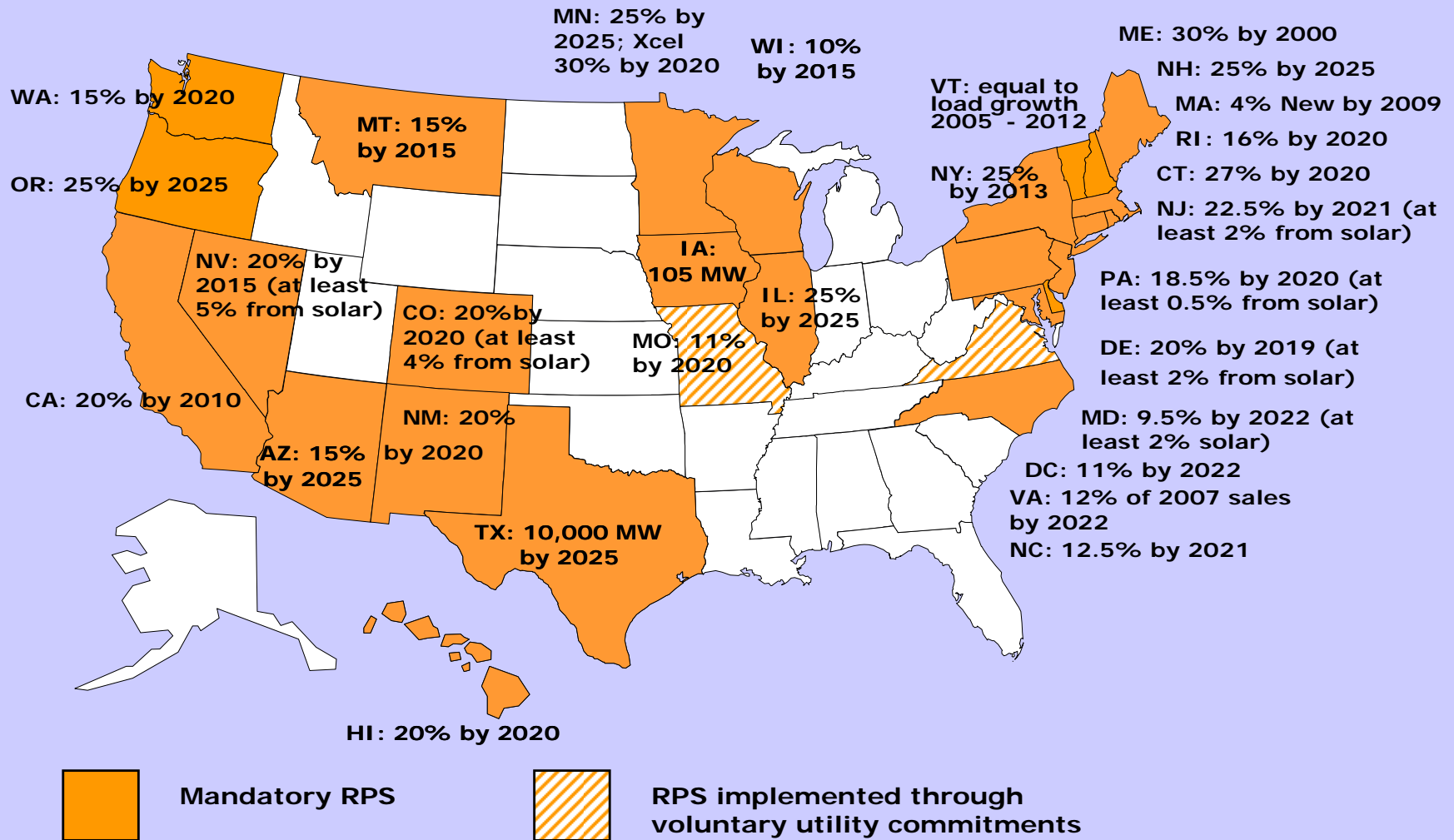
- State GHG Emission Targets
- Renewable Portfolio Standards
- Regional Cap-and-Trade Initiatives
- Vehicle Emission Standards
- U.S. Mayors Climate Protection Agreement
- Proposed Federal Legislation



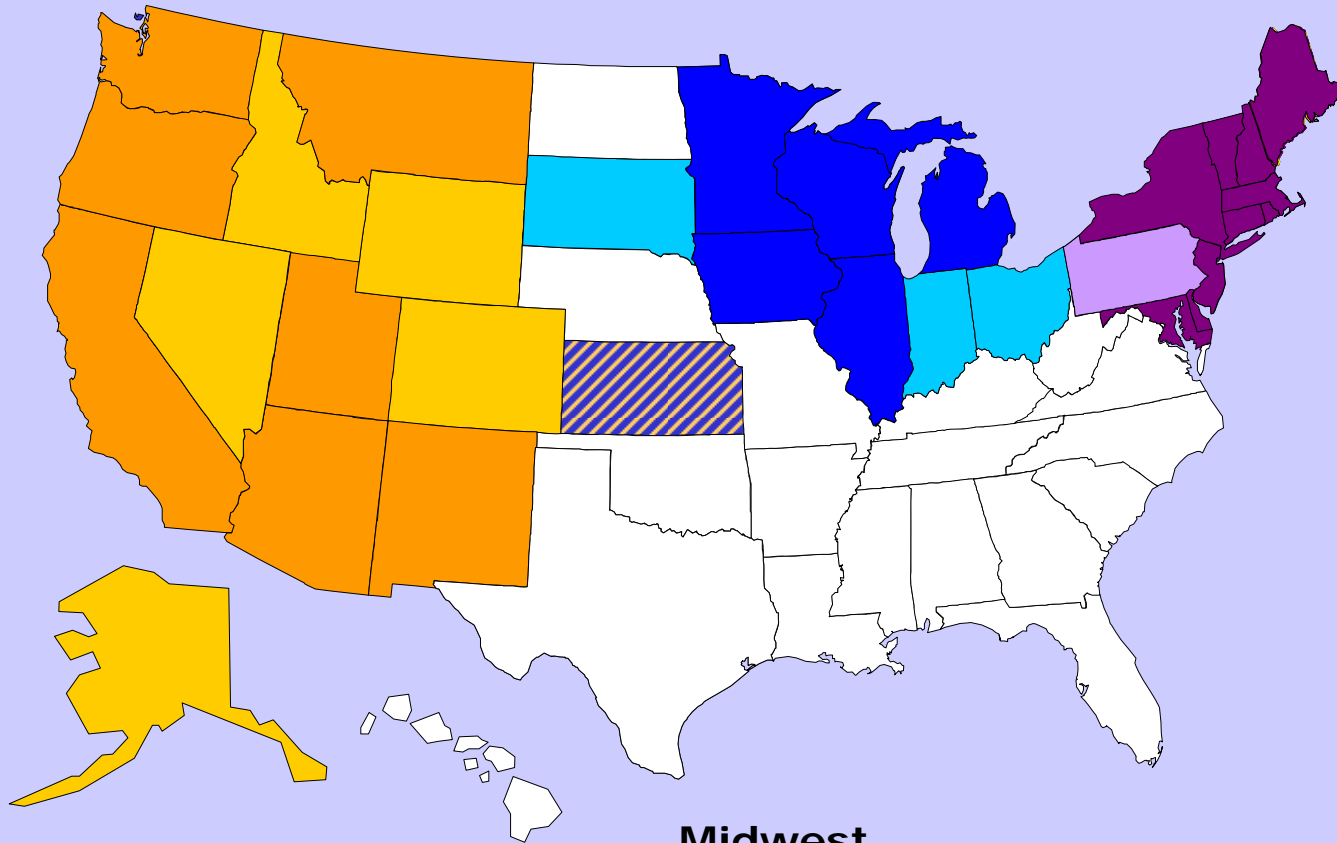
# State GHG Emission Targets







# Renewable Portfolio Standards





# Regional Cap-and-Trade Initiatives

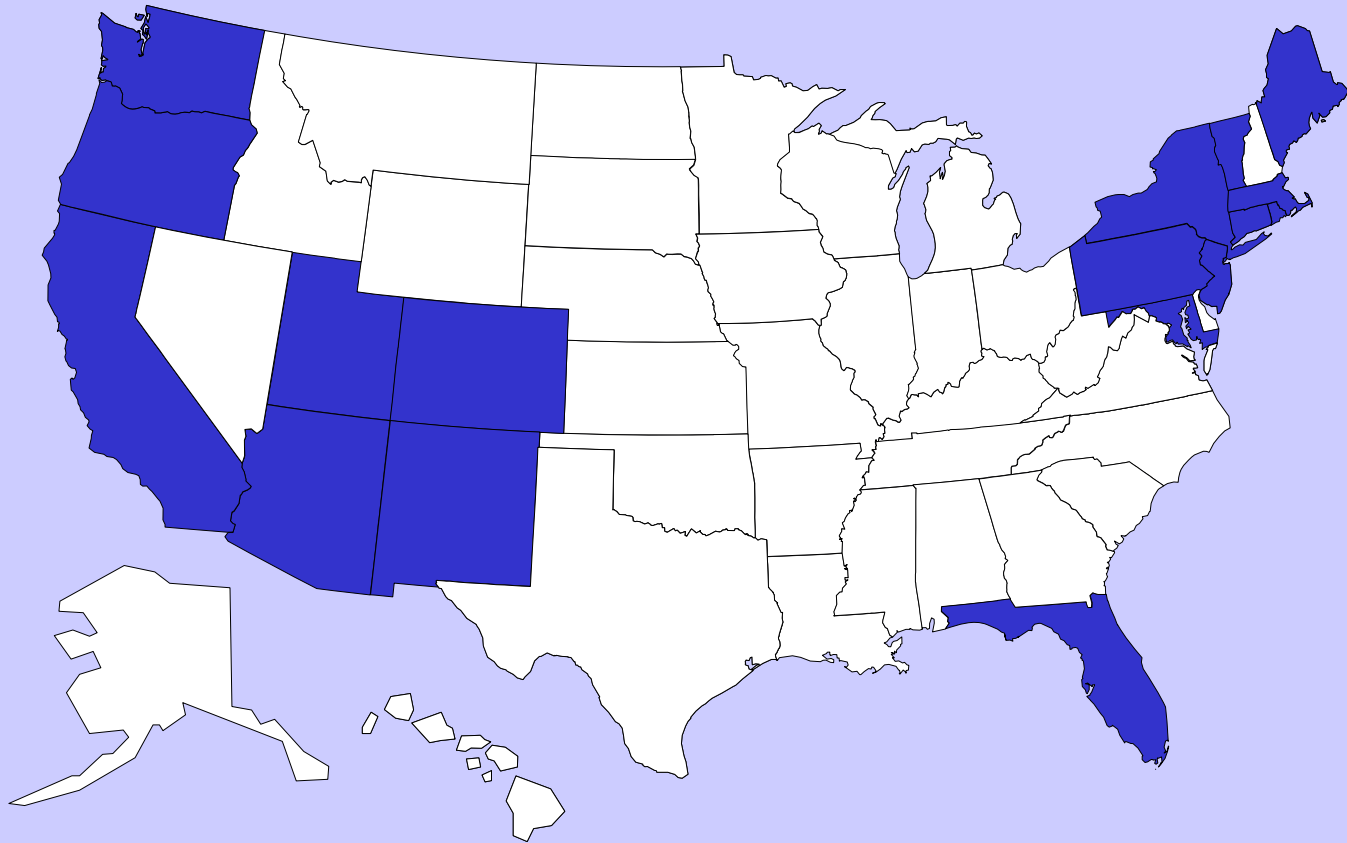


 Western Climate Initiative  
 Western Climate Initiative - Observer

**Midwest**  
 Greenhouse Gas Reduction Accord  
 Midwest Accord - Observer

 RGGI  
 RGGI - Observer

# Vehicle Emission Standards



 States Poised to Follow California's GHG Emissions Standards for Vehicles

# Local Action: U.S. Mayors Climate Protection Agreement

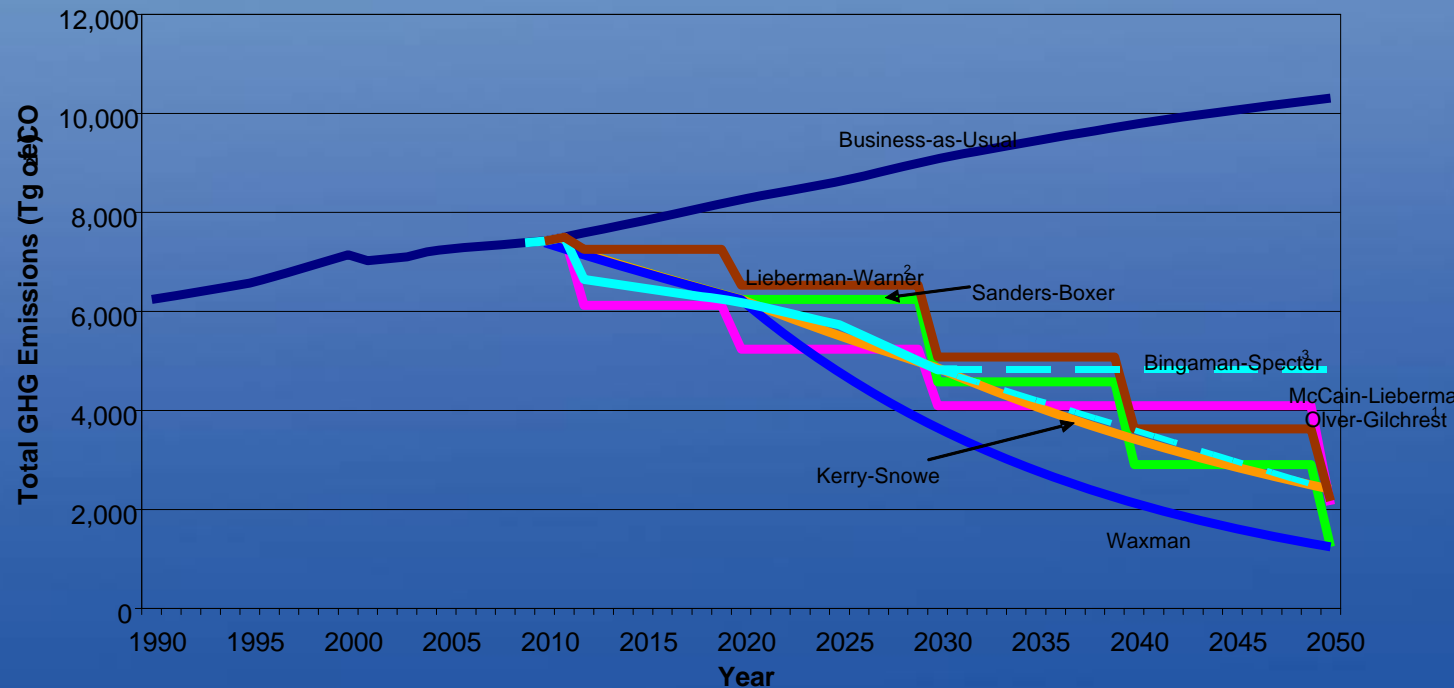


Source: <http://www.seattle.gov/mayor/climate/>

- 811 cities have signed on as of March 17, 2008 (representing more than 25% of U.S. population)
- Strive to meet or beat the Kyoto Protocol targets in their own communities (7% below 1990 levels by 2012)
- Urge higher levels of government to enact policies to meet or beat the Kyoto target
- Urge the U.S. Congress to pass bipartisan greenhouse gas reduction legislation establishing a national emission trading system

# Proposed Federal Legislation

## U.S. National Climate Change Legislative Proposals in 110th Congress (1990-2050)



# 3. Adaptation

## 4. Strategies

- Four workgroups formed in June
  - Built Environment
  - Transportation and Land Use
  - Electricity generation and other stationary sources
  - Adaptation
- Each will hold 1-2 meeting prior to August full commission meeting



# Conclusion

Governor's  
**COMMISSION on**  
**CLIMATE CHANGE**

