
State, Local and Regional Action on Climate Change

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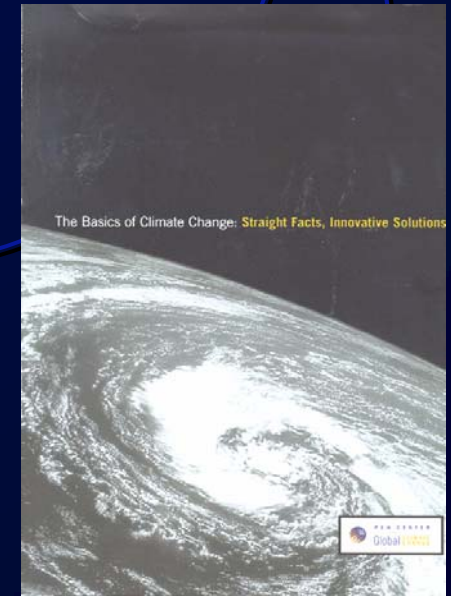
NC Legislative Commission on

Global Climate Change

February 3, 2006

The Pew Center

- Founded in May 1998
- Independent, Non-Profit, Non-Partisan
- Research (science and impacts, policy, economics, solutions)
- Education and Outreach
- Business Environmental Leadership Council



Business Environment Leadership Council



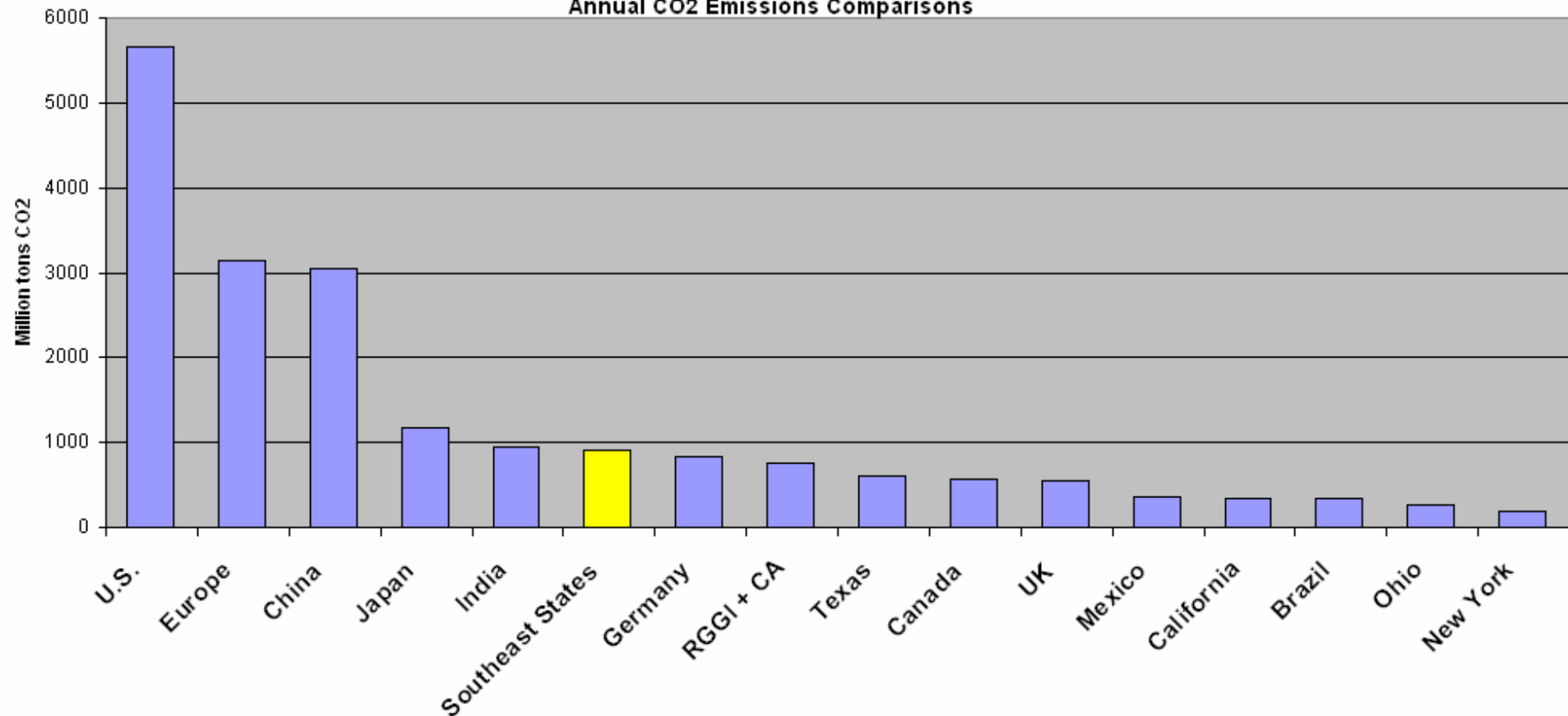
Business action

- 41 large corporations active on climate
- Primarily Fortune 500
- Employ nearly 3 million, revenues of \$1.7 trillion
- Most with large GHG emissions or GHG “footprint” through their products
- Reducing their own GHG emissions
- Developing technologies, products and services that reduce GHG emissions
- Working with policymakers to design environmentally effective policies that work for business
- More discussion at future Commission meeting

+ **Overview**

- + • **Motivation and importance of state action**
- + • **The landscape of state policies that address climate change**
- + • **Examples of policies and policy diffusion**

State-level Emissions are Significant



Note: Emissions are approximate and represent estimates from 1999 and 2000

Sources: Rabe, 2004; EIA, 2003

+ **Motivations for GHG reductions**

- + • **Concern about climate impacts**
- + • **Economic development**
- + • **Energy price volatility**
- + • **Energy independence**
- + • **Air quality concerns**
- + • **Traffic congestion**
- + • **Other**

The Landscape of State Policies

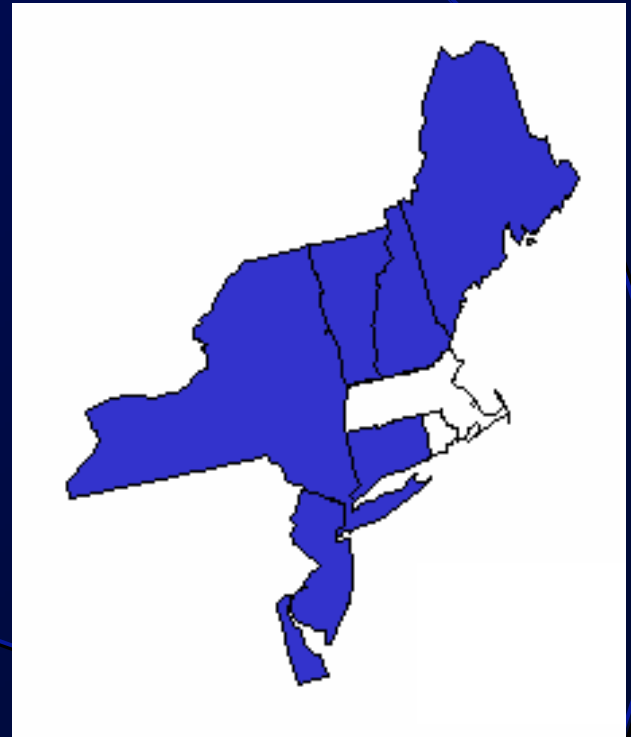
- **Direct and Indirect GHG Emission Reductions**
- **Governors and legislators are acting**
- **Almost Every State is Doing Something:**
 - **Regional Initiatives**
 - **Climate Action Plans and GHG reporting**
 - **Electricity (renewable energy mandates, carbon adders, public benefit funds, green pricing, REC tracking)**
 - **Transportation (CA GHG vehicle standards, smart growth, transportation management, cleaner fuels and vehicles)**
 - **Ag and Forestry (sequestration, renewable energy, biofuels, ethanol)**
 - **Other (e.g., energy efficiency, waste management)**

RGGI

Regional Greenhouse Gas Initiative

An Initiative of the Northeast & Mid-Atlantic States of the U.S.

- Regional cap-and-trade program initially covering power plant CO₂ emissions
- Initiated 2003 by NY Gov. Pataki, RGGI announced Dec. 2005
- First mandatory U.S. GHG cap-and-trade program
- Stabilize emissions at current levels 2009 until 2015, 10% reduction by 2019



California Actions

- **Targets and timetables:**
2000 levels by 2010, 1990 levels by 2020,
80% below current emissions by 2050
- **Governor's Climate Action Team**
- **Renewable Portfolio Standard**
- **Vehicle GHG standards: 22% reduction by 2012; 30% by 2016**
- **Every agency is doing something**
- **E.g., Energy Commission Integrated Energy Policy Report (IEPR); CPUC carbon adder**

Pennsylvania's Approach

- **Alternative Energy Portfolio Standard**
 - Tiered Standard
 - Tier I (8% by 2020): solar, wind, low-impact hydro, coal mine methane, fuel cells
 - Tier II (10% by 2020): waste coal, large hydro, municipal solid waste, IGCC
- **EDGE: Energy Deployment for a Growing Economy**
- **Energy Harvest Grant Program**
- **Energy Development Authority**
- **Alternative Fuels Incentive Grant Program**

Action in the Southwest

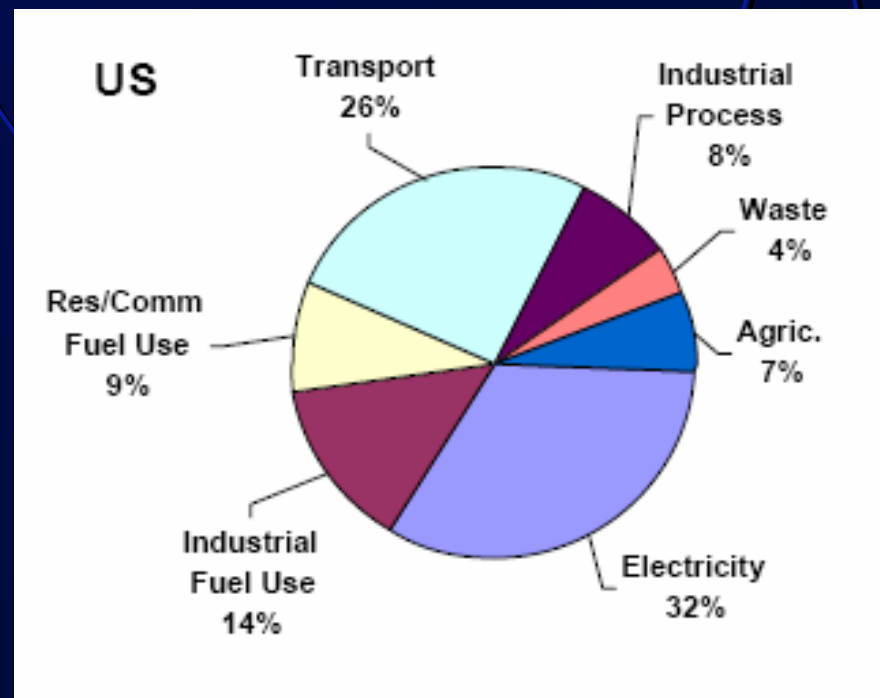
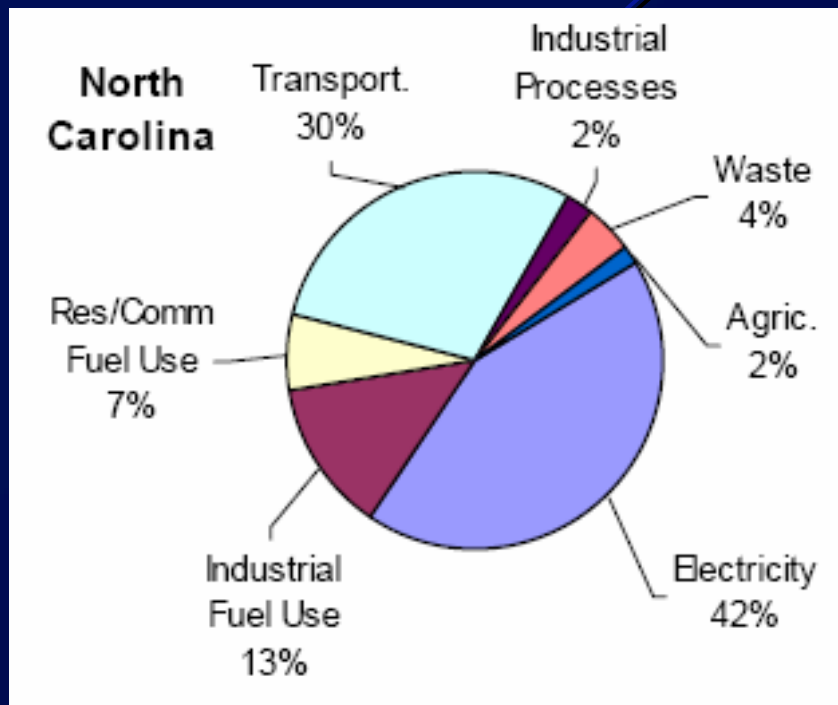
- **Arizona**

- Governor's executive order established Advisory group developing plan, targets
- Renewable Portfolio Standard
- Recommendations due June 2006

- **New Mexico**

- Emissions target: 2000 levels by 2012, 10% below 2000 by 2020
- Report on impacts to the state
- Governor's executive order established Advisory group developing a strategy to meet targets
- Report to governor due Dec 1, 2006

NC and US GHG emissions by Sector

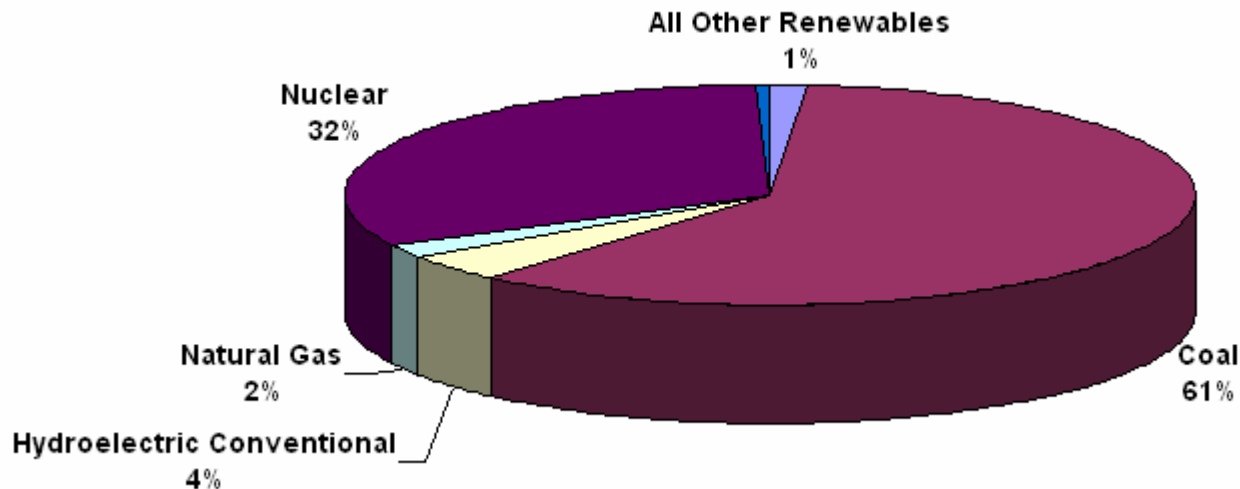


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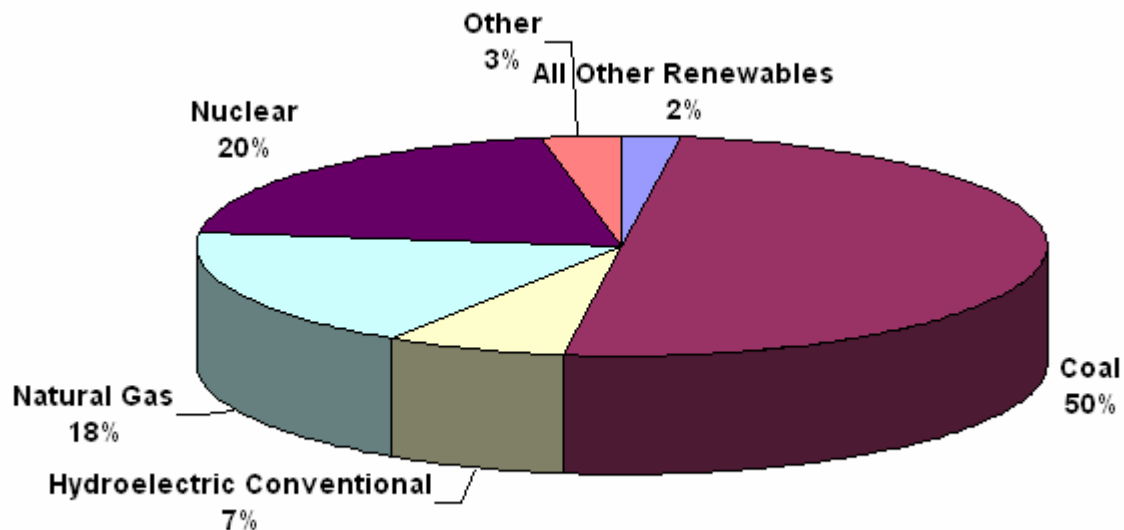
Draft North Carolina Greenhouse Gas Inventory, Center for Climate Solutions, 2005

Electricity Fuel Sources (1)

North
Carolina
Instate
Generation

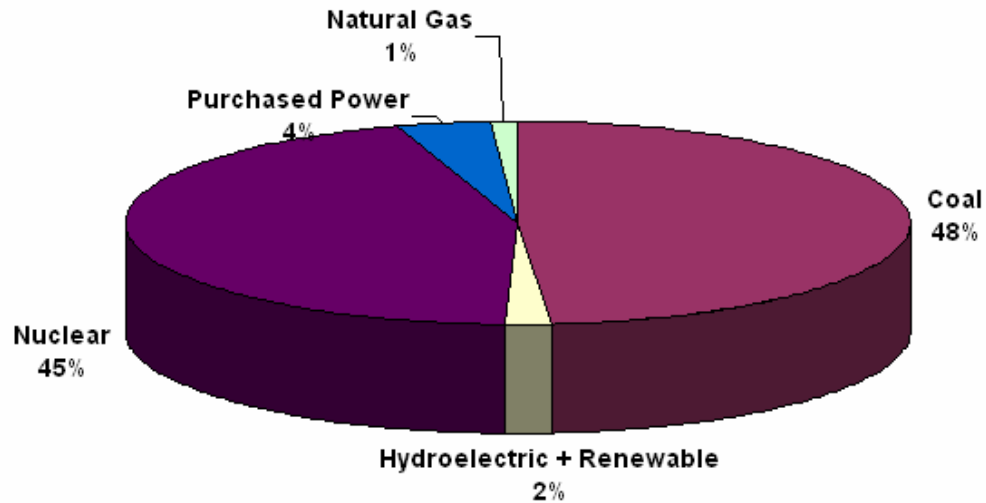


United
States

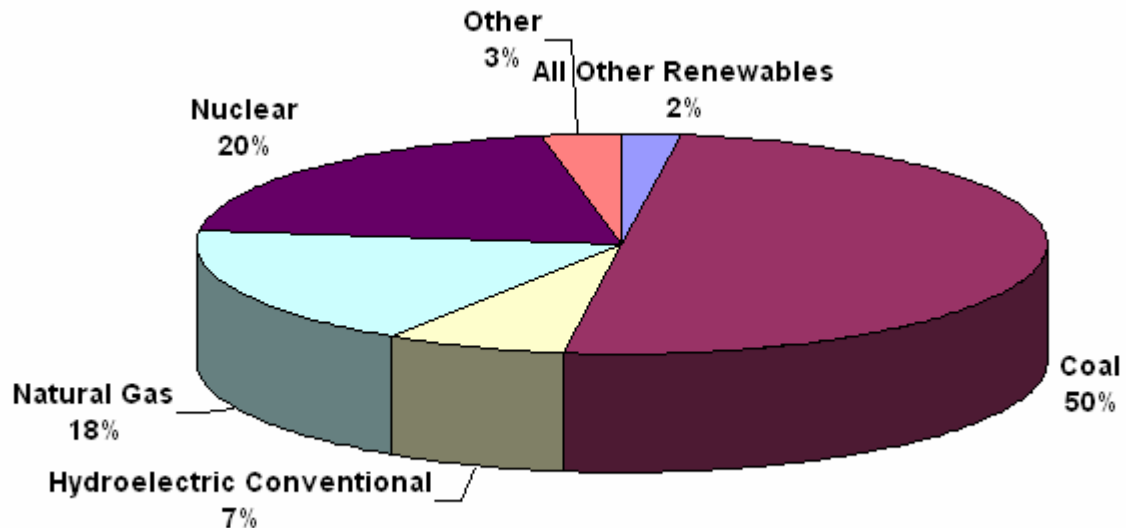


Electricity Fuel Sources (2)

North
Carolina
Consumption



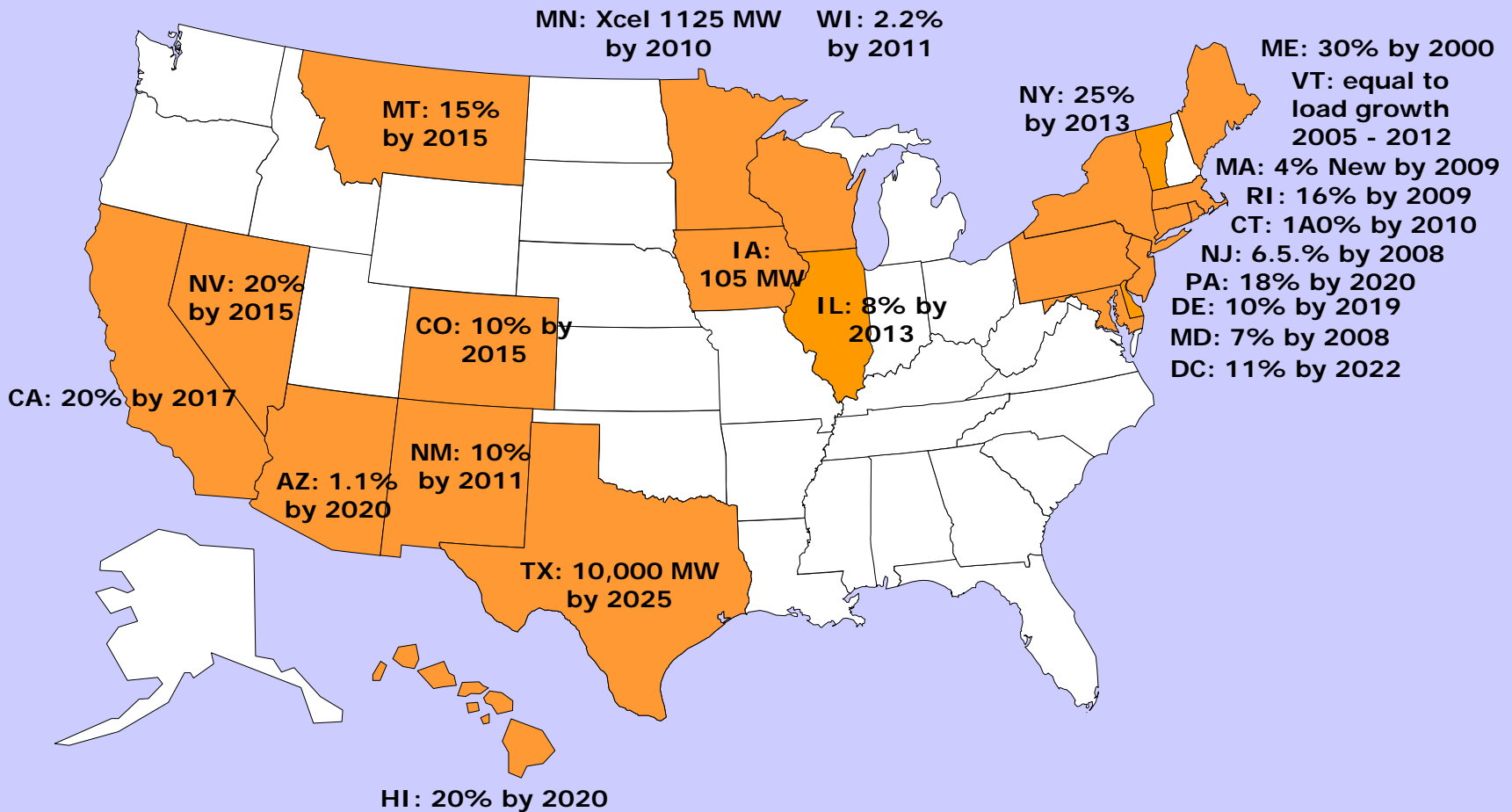
United
States



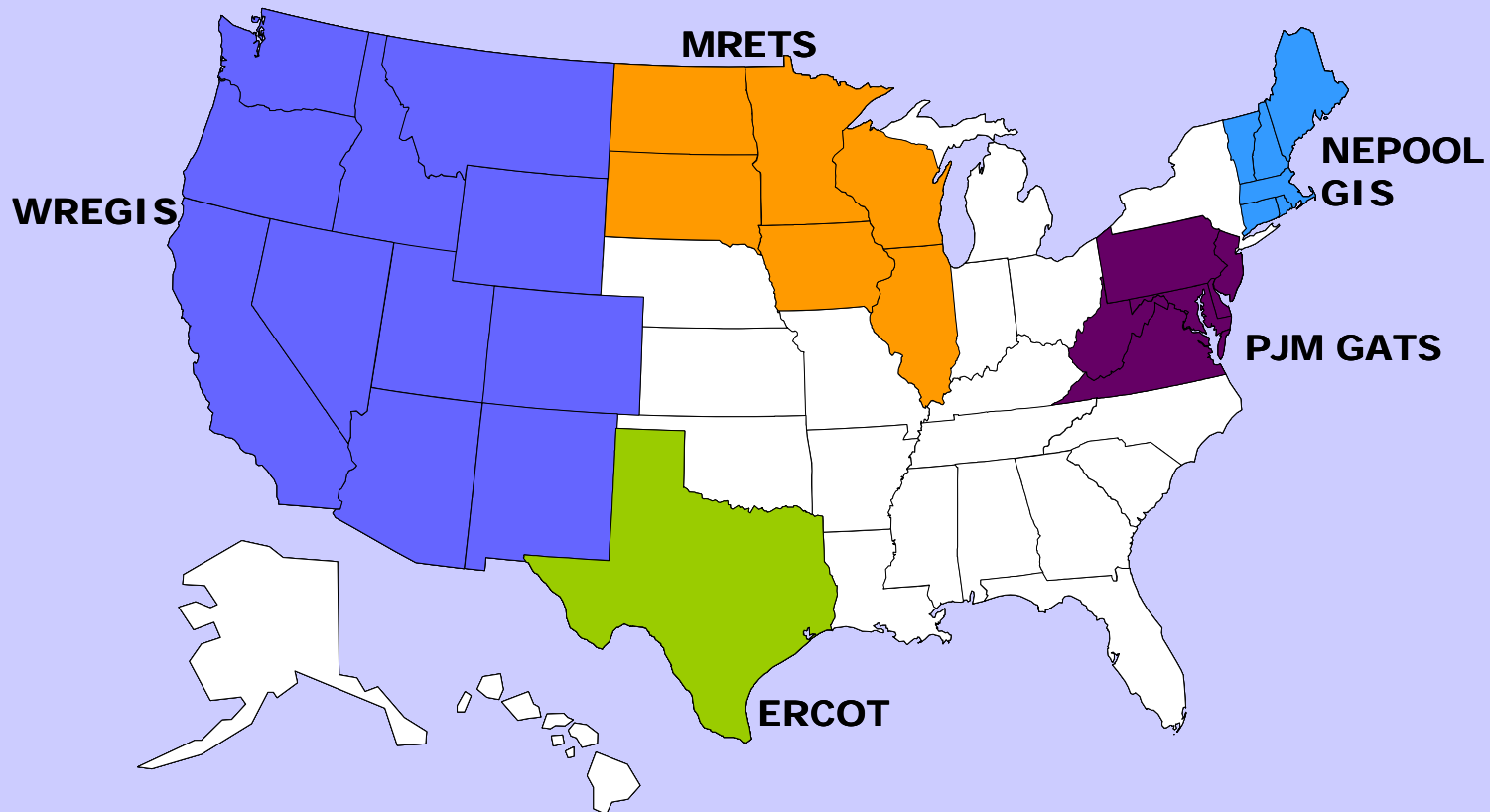
Coal Actions

- Pennsylvania (multiple initiatives including AEPS and EDGE)
- California CEC electricity standard
- RGGI
- MA powerplant CO₂ emissions rule
- Western Governors Association considering incentives for CCS demo projects
- Powering the Plains: Midwestern effort
- Many efforts to promote IGCC
- → IGCC is helpful but not sufficient; carbon capture and sequestration is necessary

Renewable Portfolio Standards





REC Tracking Systems



 Western Renewable Energy Generation Information System

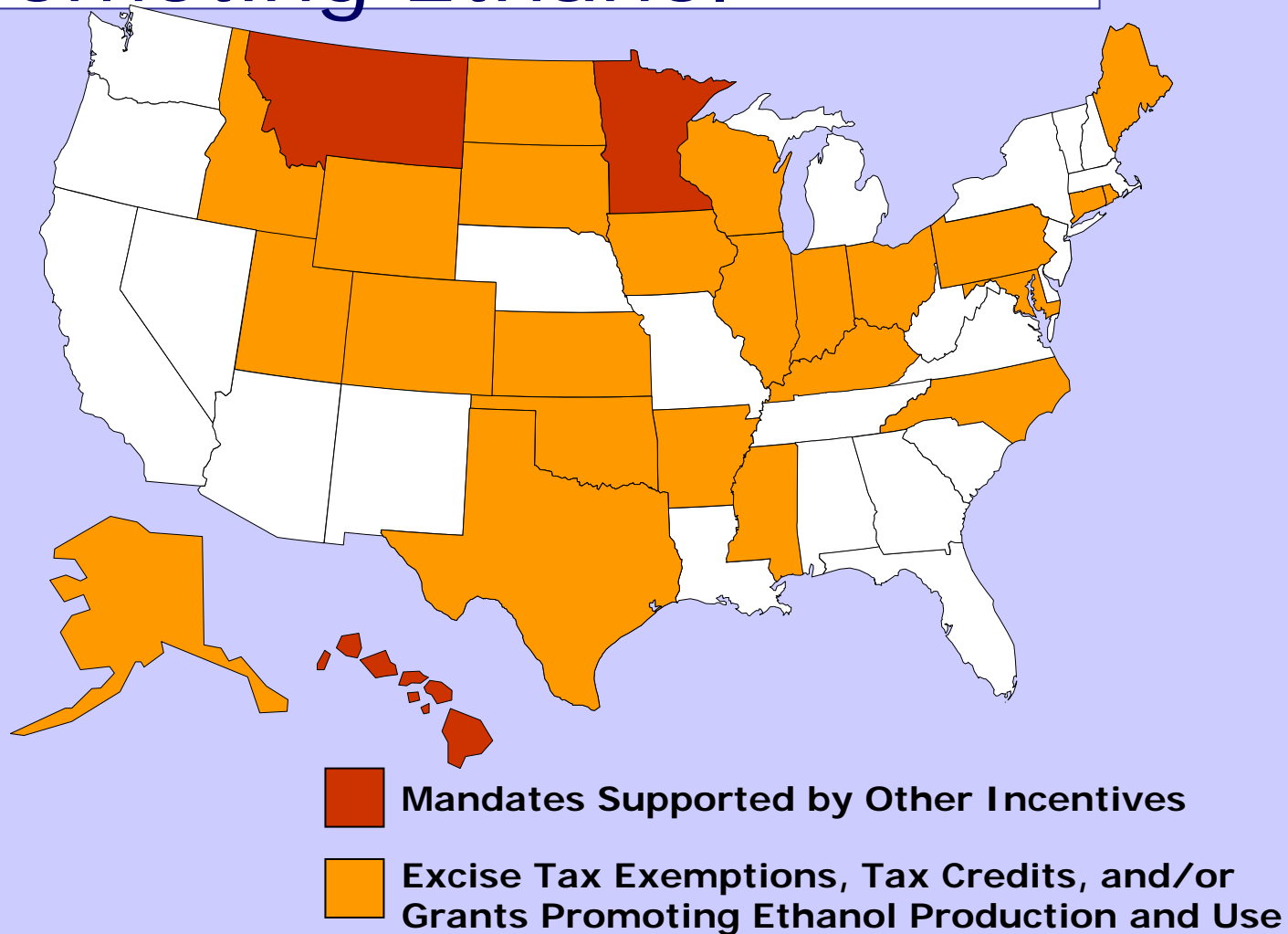
 New England Power Pool Generation Information System

 Midwest Renewable Energy Tracking System

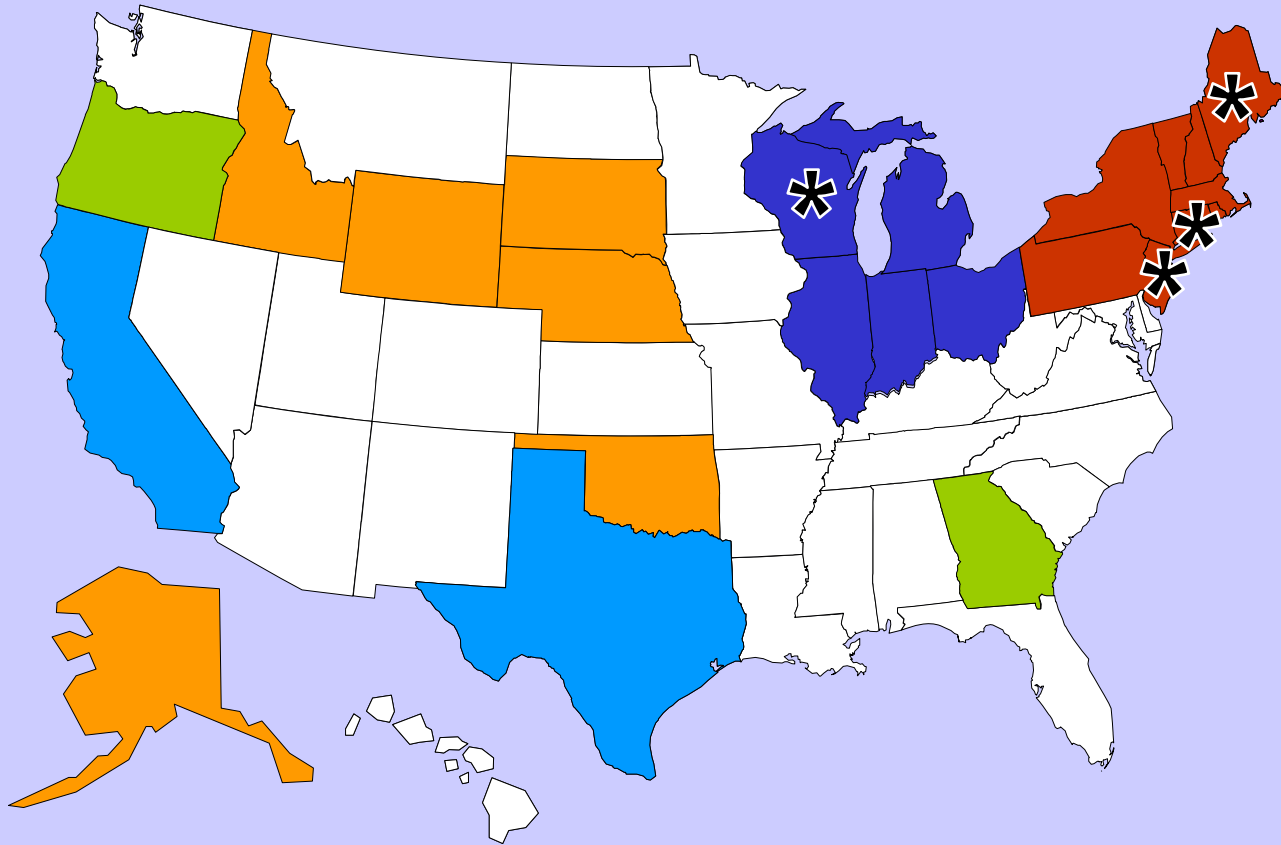
 PJM Generation Attribute Tracking System

 Electric Reliability Council of Texas

Mandates and Incentives Promoting Ethanol



GHG Reporting & Registries



Light Blue Voluntary Registries

Asterisk Mandatory Reporting

Red Regional Greenhouse Gas Registry

Dark Blue Lake Michigan Air Directors

Green Registries in Development

Orange Sequestration Board Studying Registries

Local Action

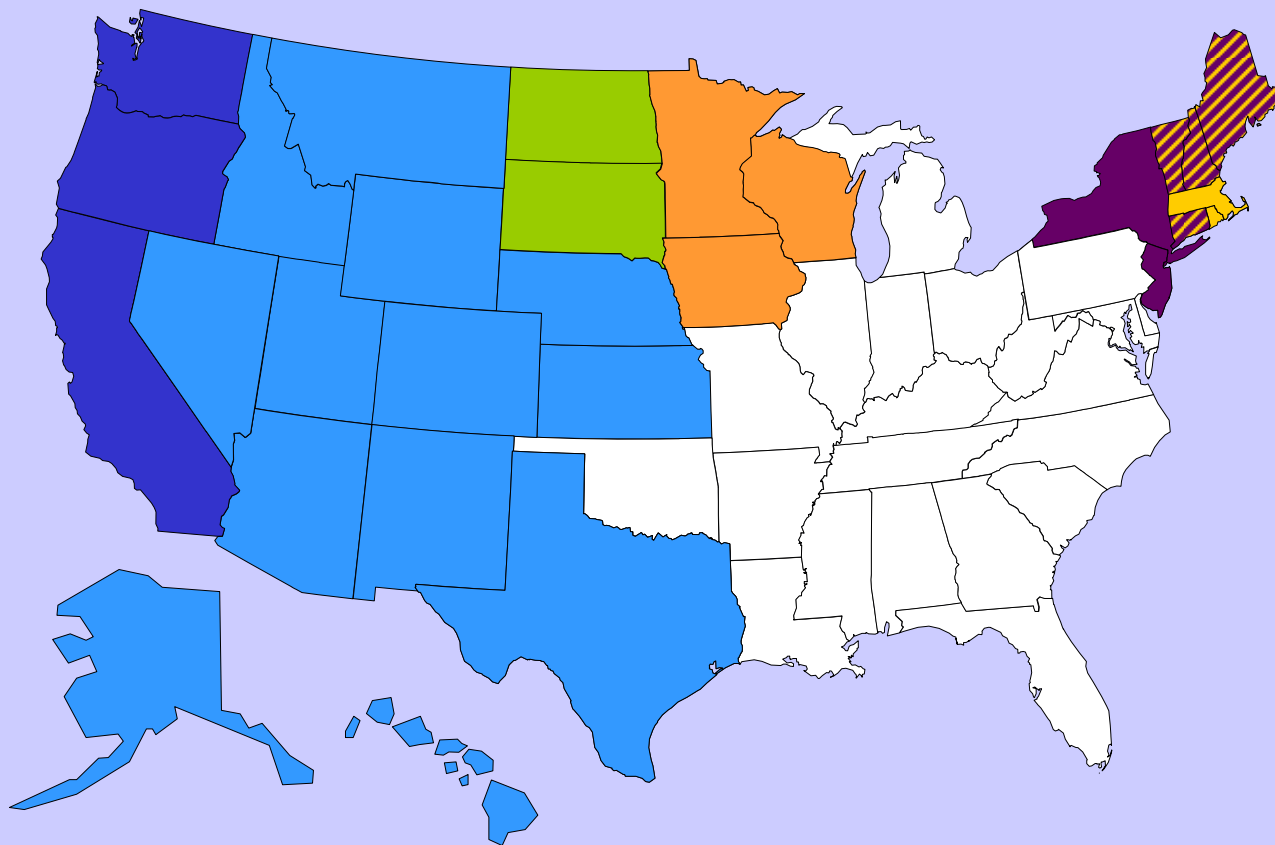
U.S. Mayors adopting Kyoto Target:



+ **Local Action**

- + • **ICLEI's Cities for Climate Protection**
 - + – Over 600 cities worldwide implementing plans to reduce GHG emissions
- + • **Cities are adopting climate strategies in:**
 - + – Transportation
 - + – Water management
 - + – Building standards
 - + – Renewable energy procurement
 - + – Smart growth
 - + – Energy efficiency

Regional Initiatives



West Coast Governors' Initiative & WGA



Powering the Plains



NEG-ECP



WGA & Powering the Plains



WGA



RGGI

Examples of Policy Opportunities

Near term recommendations from DENR report:

- Cleaner coal and renewable energy capacity
- Mandatory GHG reporting
- Energy efficiency
- Center of low-carbon technology development
- Work with other states in the Southeast

Longer term recommendations:

- Agriculture (Sequestration, biofuels production)
- Public Benefit Fund
- Renewable Portfolio Standard
- Transportation emissions reductions

Conclusion

- States are leading on climate
- Stakeholder (including private sector) engagement is central to these efforts
- Multiple drivers; multiple benefits
- Achieving real emissions reductions
- States have relevant authorities
- States provide lessons for federal action
- Even with federal action, states will play a key role
- Trend toward regional action

Further information

Pew Center on Global Climate Change

www.pewclimate.org

NC Waste Management Program

- Aftermath of Hurricane Floyd flooding hog lagoon waste, NC Attorney General settled with two state hog producers:
- Funded NC State University to develop and assess methane waste-to-energy technologies
 - Technical and economic feasibility
- Final report and implementation in 2006