

State Climate Change Actions



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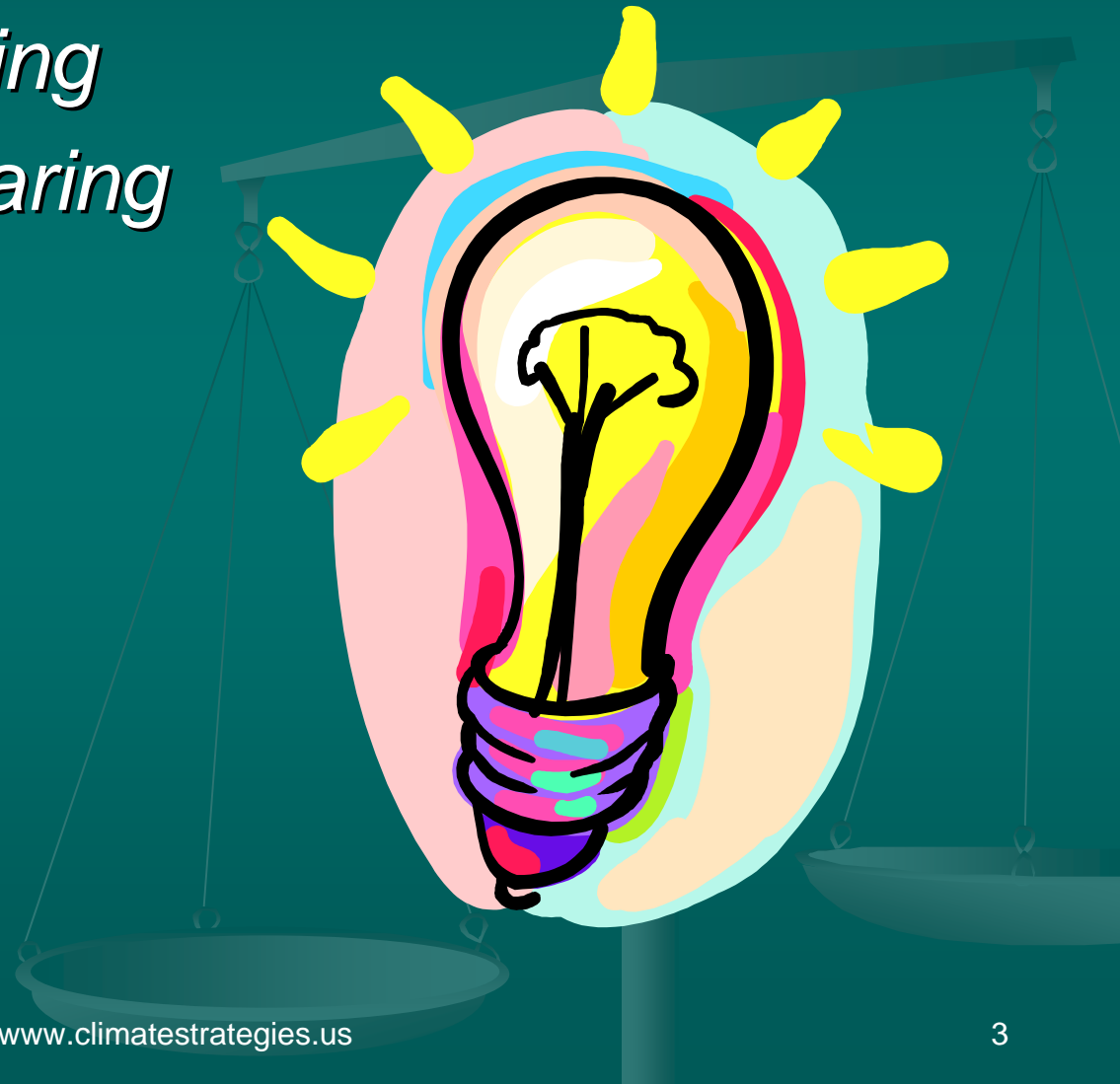
Reasons For State Action



- Coincidence
- Co Benefits
- Concern about risk
- Cost effective solutions
- Public awareness
- Future markets
- Future mandates
- Leadership

Policy Evolution

- *Learning by Doing*
- *Learning by Sharing*



The Challenge

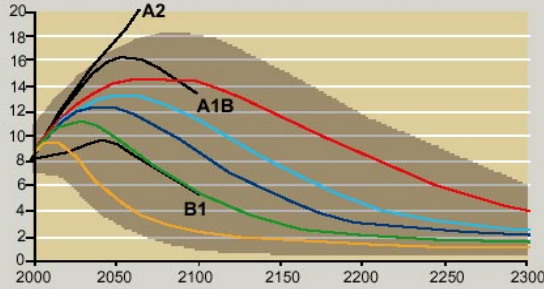
- “The ultimate objective of this Convention is to achieve, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.”
 - UNFCCC Article 2 Objective, Rio De Janeiro



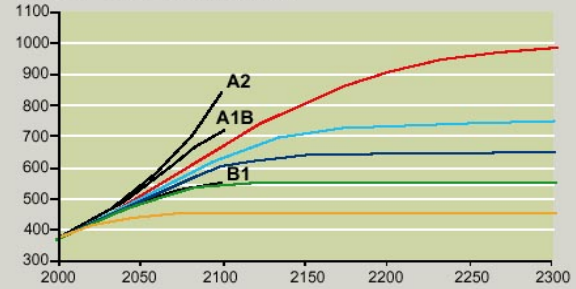
The Future?

Emissions, concentrations and temperature changes corresponding to different stabilization targets for CO₂ concentrations

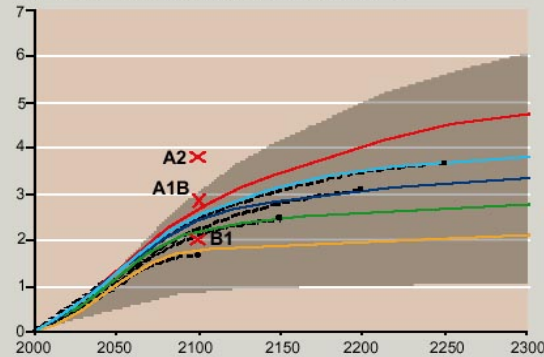
(a) CO₂ emissions (Billions of tonnes of carbon)



(b) CO₂ concentration (ppm)



(c) Global mean temperature change (°C)



WRE scenarios

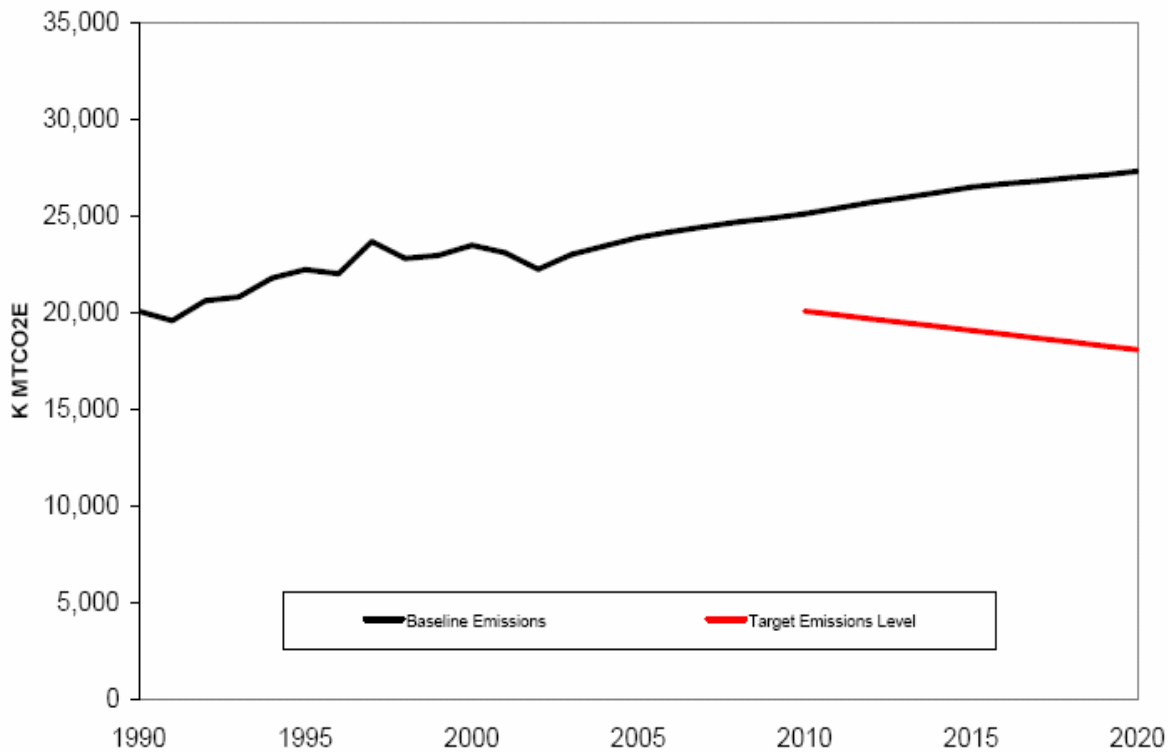
- WRE 1000
- WRE 750
- WRE 650
- WRE 550
- WRE 450

SRES scenarios

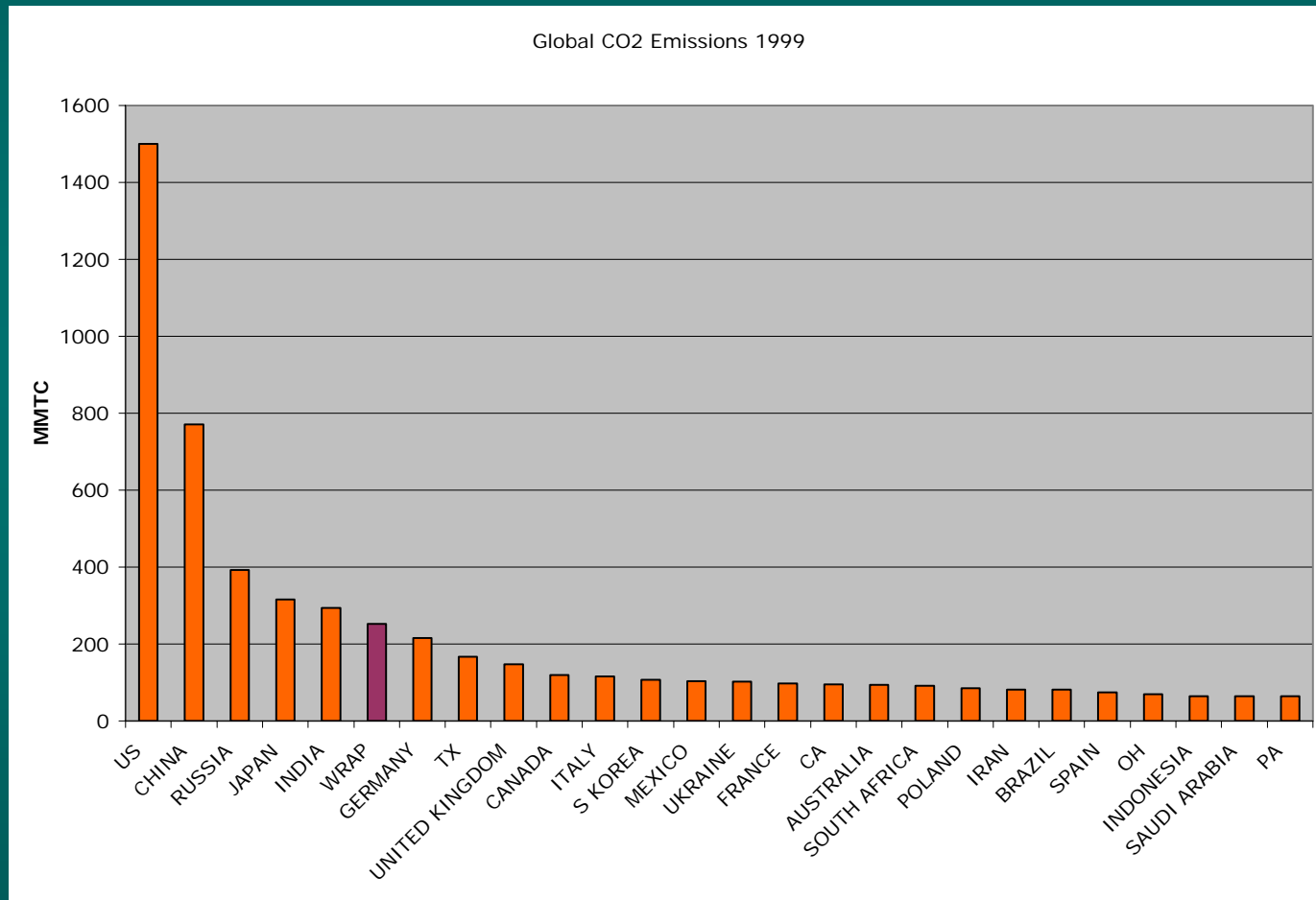
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The Challenge

Figure 1: Emissions Baseline and Target



Magnitude Of State Emissions



Where Do We Start?



Have Faith



- “...As the children stared at the large stone wall around the orchard and wondered how they would ever scale it, one threw his hat over and said: “Now we must find a way”...”
 - Maine Governor John Baldacci, 2003

Emerging Climate Actions

- 200+ types across US States
 - All sectors
 - All mechanisms
- 30 Statewide plans since 1990's
 - 7 completed since 2001
 - More underway
- 4 Regional agreements
 - NEG/ECP, RGGI, PTP, WCCI
- Many local actions
 - Cities and counties
 - Companies and Institutions

State Sectors



- Energy Supply
- Residential, Commercial, Industrial
- Transportation and Land Use
- Agriculture
- Forestry
- Waste Management

Key Action Areas

- Renewable energy
- Energy efficiency
- Advanced technology
- Gas leaks
- Transportation efficiency
- Forest management and sequestration
- Farm practices and sequestration
- Recycling
- Waste energy

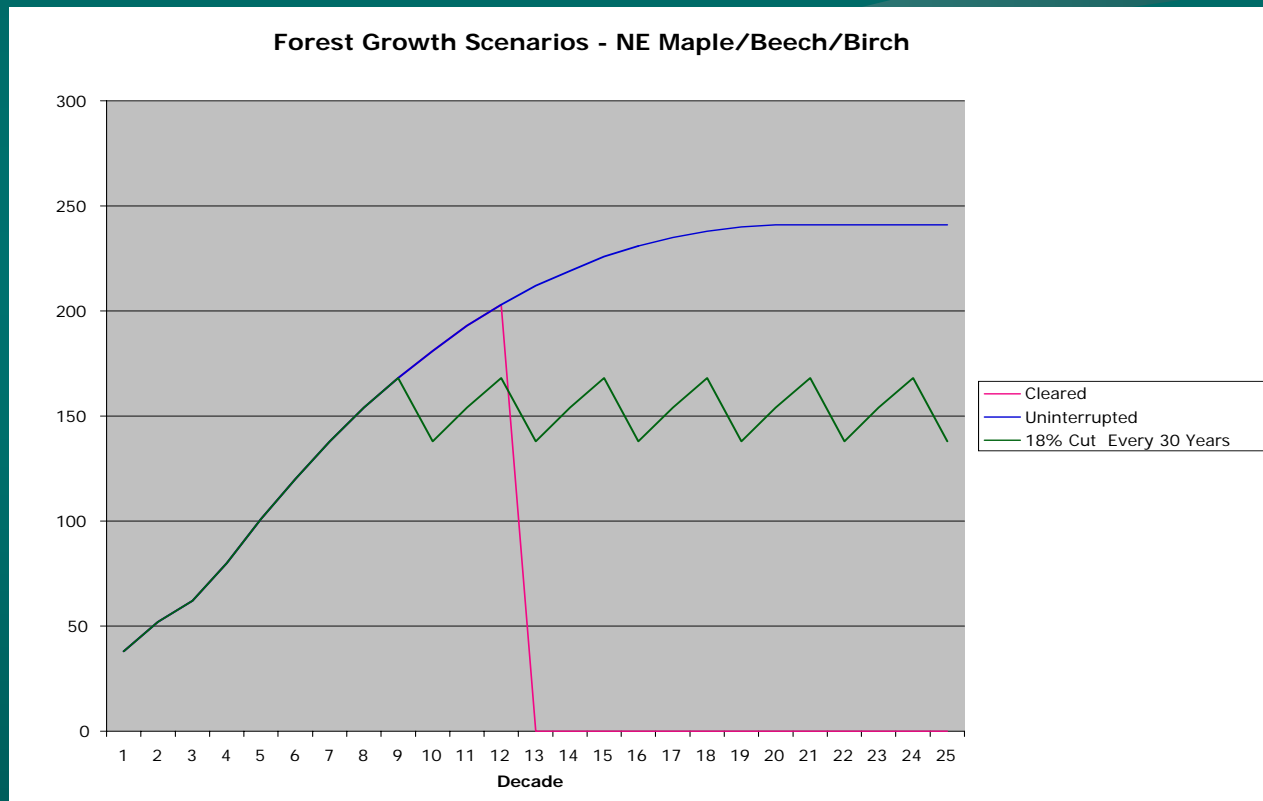


Implementation Mechanisms



- Voluntary Agreements
- Technical Assistance
- Information and Education
- Financial incentives
- Codes and Standards
- Market Approaches
- Reporting and Registries
- Others!

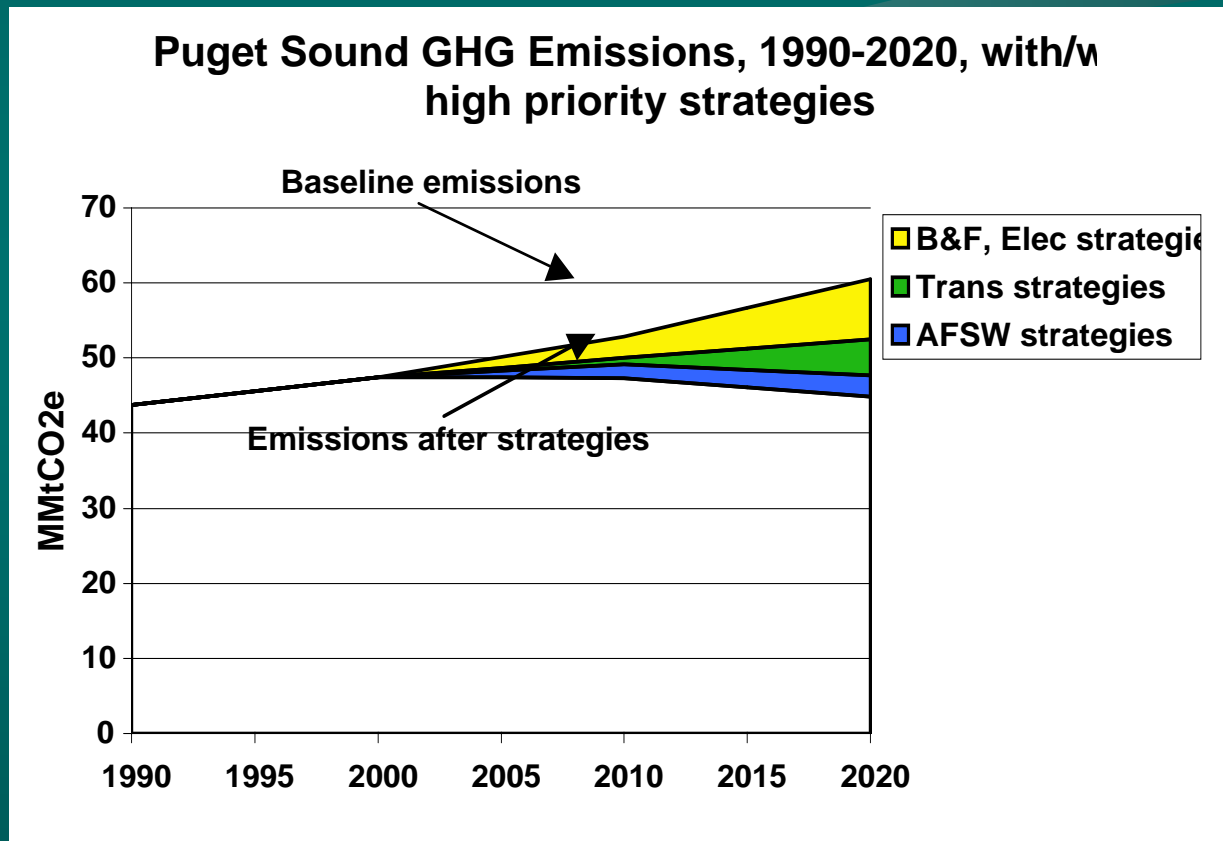
Development of Options



Policy Portfolios

| Sector | Mechanism | | | | | | | |
|--|-------------------|-------------------|--------------------|----------------------|----------------------------------|-------------------------|----------------|------------------------|
| | Codes & Standards | Market Mechanisms | Funding Mechanisms | Voluntary Agreements | Technical & Financial Assistance | Information & Education | Pilots & Demos | Reporting & Disclosure |
| Agriculture | | | | | | | | |
| Commercial, Residential And Industrial | | | | | | | | |
| Energy Supply | | | | | | | | |
| Forestry | | | | | | | | |
| Transportation and Land Use | | | | | | | | |
| Waste Management | | | | | | | | |
| Cross Cutting Issues | | | | | | | | |

Progress Toward Goals

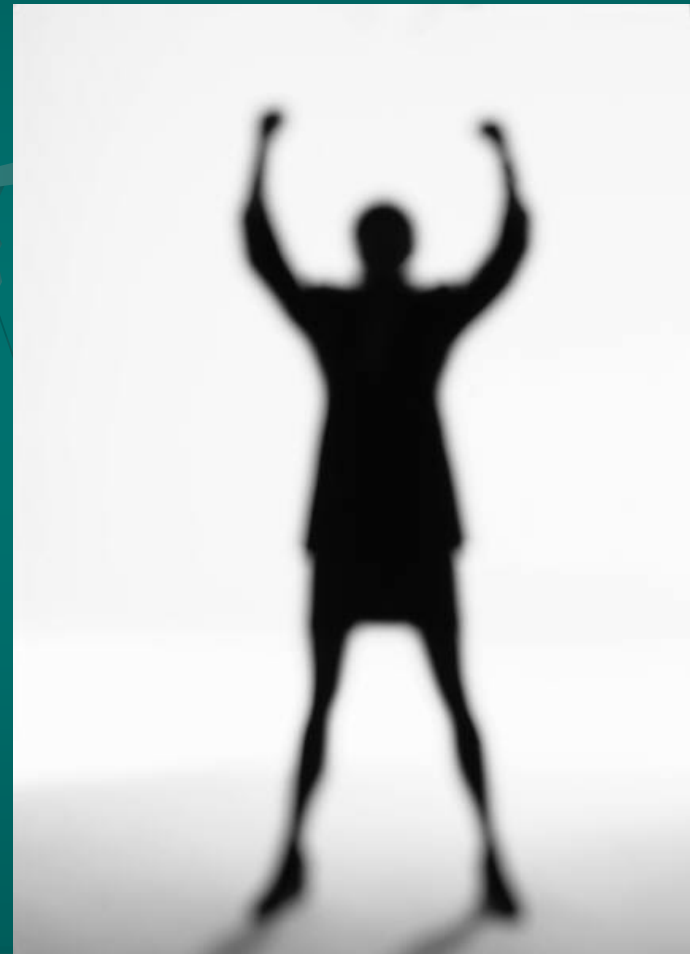


State Goals & Forecasts

| State | GHG Forecast | Goal | Result |
|-------|-----------------|---------------------|--------|
| CT | 32% (1990-2020) | NEG/ECP | 100% |
| MA | ? | NEG/ECP | ? |
| ME | 34% | NEG/ECP | 100% |
| NEG | ? | NEG/ECP | TBD |
| NJ | ? | 5% -1990 by 2005 | 100% |
| NY | 24% | 5% -1990 by 2010 | ? |
| OR | 38% | NEG/ECP | 85% |
| Puget | 37% | NEG/ECP? | 100% |
| RI | 35% | NEG/ECP | 100% |

Results Of State Efforts

- Stakeholder based plans
 - Reduce 2% per year below forecasted baseline
- Policy portfolios
 - Consensus approaches
 - Variety of actions and mechanisms
 - Large plus small actions
 - Cost savings
 - Co benefits



Reporting & Registries



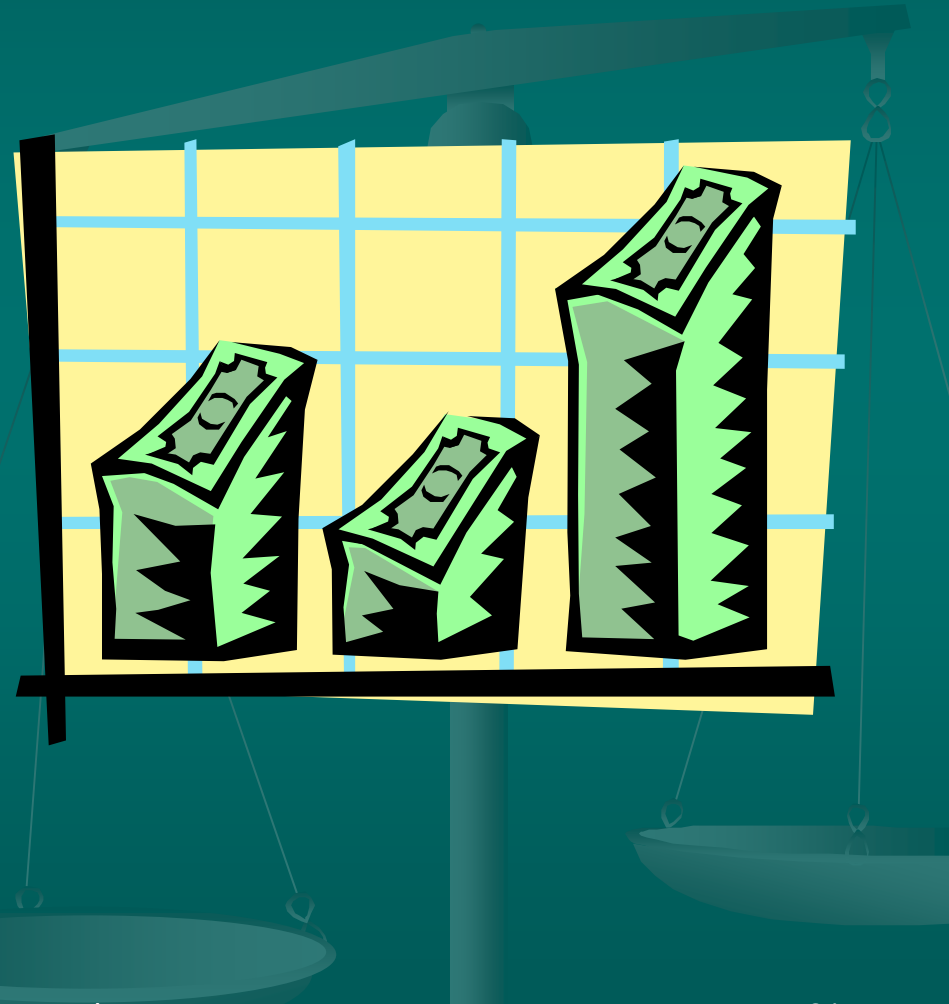
- Reporting
 - Diagnose policy needs
 - Coordinate programs
 - Track progress
- Registries
 - Credit future action
 - Protect past action
 - Create markets

Regional Climate Initiatives

QuickTime™ and a
TIFF (Uncompressed) decompressor
are needed to see this picture.

Regional Advantages

- Cost and flexibility
 - Broader choice of actions
 - Better fit with markets
 - Shared assessments
 - Shared programs
- Certainty
 - Consensus approaches
 - Common accounting
 - Common crediting
- Strength
 - National voice
 - Regional trading block



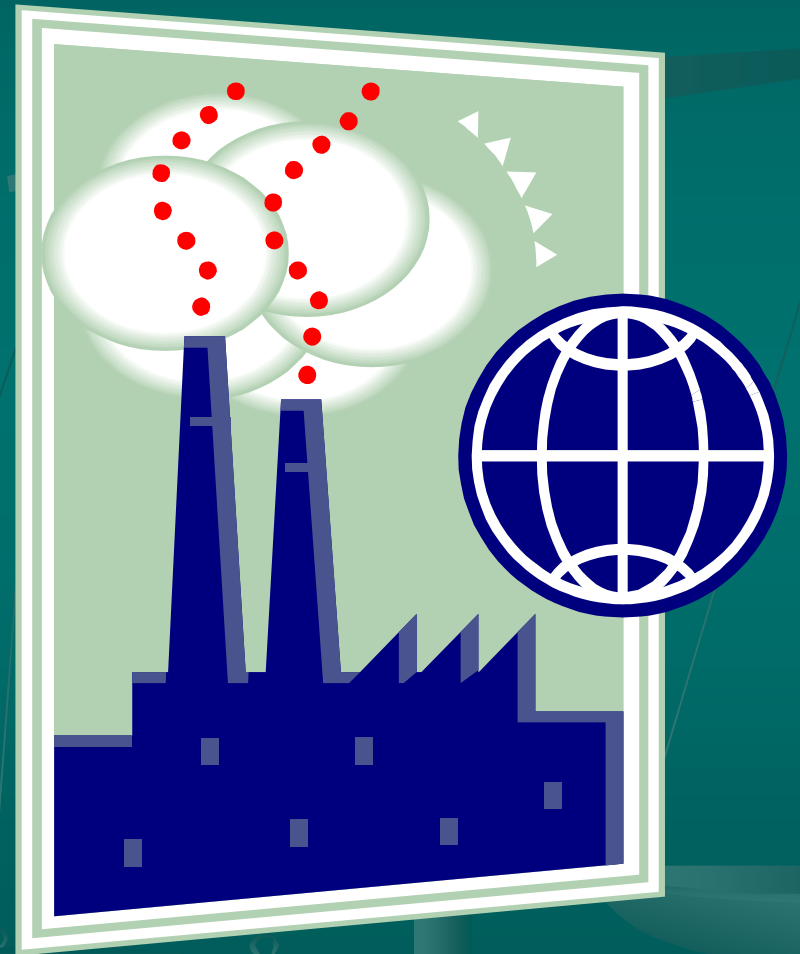
NEG/ECP

- 2001 regional agreement
 - Modeled after Mercury, SO₂ Agreements
- Regional target (nonbinding)
 - 1990 GHG levels by 2010
 - 10% -1990 levels by 2020
 - 75-85% reductions by 2100, pending new science
- Encourage individual state plans and joint policies



RGGI

- Outgrowth of state planning in NY, CT, NJ
- Focused on power sector cap and trade program
- 9 states, with observers (including PA, MD)
- Model rule in progress
- Implementation by individual states by MOU
- Key issue: power imports/exports



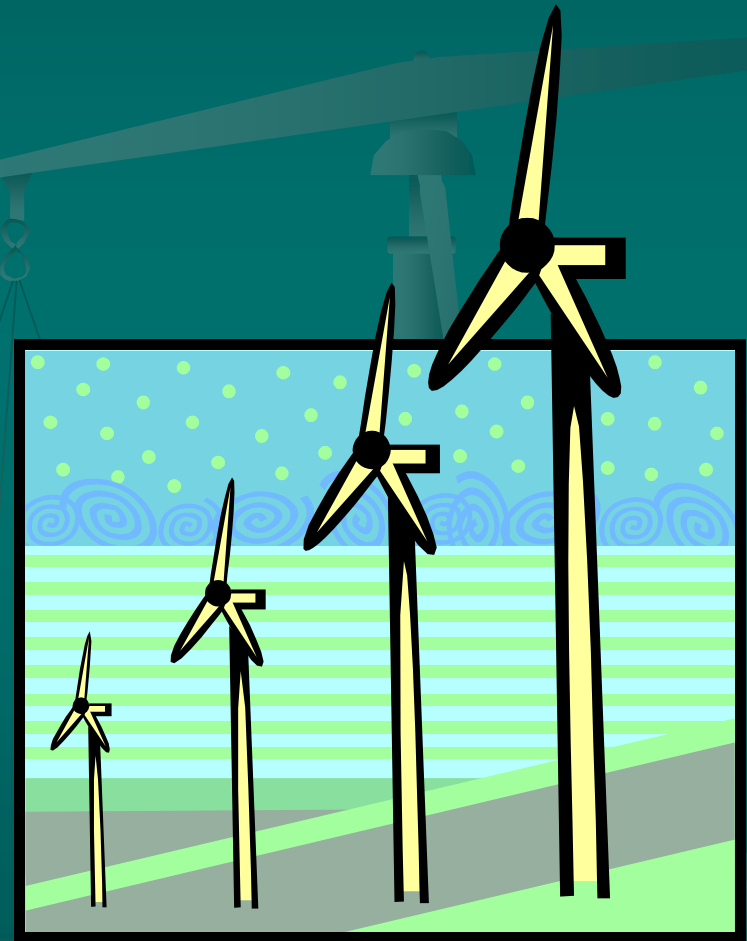
Powering The Plains

- 2002 Agreement of the Dakotas, Iowa, Minnesota, Manitoba, Wisconsin
- Transition to renewable energy and carbon neutral economy
- Alternative energy sources and technologies



West Coast Climate Initiative

- California, Oregon, Washington
- In progress
 - Regional assessments
 - Goals
 - State actions (including plans)
 - Multi state actions



Anatomy Of State Plans

- GHG inventories and baseline forecasts
- Actions across sectors
- Implementation mechanisms
- Goals
- Reporting and tracking



Public Involvement

- Constituent representation
 - Stakeholders
 - Technical work groups
 - Public
- Discussion framework
 - Fact-based
 - Stepwise process
 - Transparent, inclusive
 - Self determined



Decision Criteria



- GHG reduction potential
- Cost per ton GHG removed
- Ancillary issues
- Feasibility issues

Technical work plan



- Diagnosis
 - Inventories from 1990 to 2000
 - Projections to 2010, 2020
 - Existing actions and knowledge
 - Conceivable new options
- Evaluation
 - Priorities for analysis
 - Preliminary impacts
 - Cost effectiveness
 - Alternative policy designs
 - Final option selection and design

Cost And Fairness

- Efficiency
 - Comprehensive framework
 - Incentive systems
- Equity
 - Regional flexibility
 - Timing flexibility
 - Cost sharing
 - Democracy



Costs



- 1997 EIA Kyoto Analysis
 - \$102 - 437 billion
 - 1.0 - 4.2% GDP
- 2005 EIA National Energy Commission Analysis
 - \$26.5 billion
 - 0.26% GDP; No impact on economic growth
- 2003 McCain-Lieberman RFF Analysis
 - \$9 billion
- 2001-2005 State GHG Plans
 - Much lower...

Cost Variables



- Policy options
- Policy design
 - Levels
 - Timing
 - Coverage
 - Mechanism
- Analysis
 - Methods
 - Data sources
 - Assumptions

Center for Climate Strategies



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