Implications of Global Agreements on Climate Change for Michigan

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Summary

• What are global agreements and how do they affect national, state, and local policy?

• How can Michigan respond to and prepare for global agreements?

• What are some of the actions Michigan is already taking?
Climate Change: A Global Problem

- Climate change is a global problem
  - Greenhouse gases are not confined by national boundaries
  - Impacts are unequally distributed
International Law and Climate Change

• Requires global cooperation to solve the problem
  – Manifested as international law

• No legal authority above the nation-state
  – Cannot force countries to participate in or comply with international agreements
  – Agreements are essentially voluntary and must be in each country’s national interest
The Kyoto Protocol

• The Kyoto Protocol was created in 1997 in order to set limits on greenhouse gases for developed countries
  – An update of the United Nations Framework on Climate Change treaty
  – Requires 6-8% reductions in CO₂ from 1990 levels by 2012
  – Does not require developing countries to make reductions

• Three “flexible mechanisms” designed to increase efficiency by decreasing the cost of emissions reductions:
  – Clean Development Mechanism
  – Joint Implementation
  – Emissions trading

• The US is the only advanced industrialized country not to ratify the Kyoto Protocol
  – Argued that it would cause serious harm to our economy
  – Demanded that China and India make commitments to reduce emissions
The Future of Global Agreements

• At the Bali climate talks in 2007, nations agreed to create a new global climate treaty by 2009

• Three goals for the next global agreement:
  – Getting developing nations to participate and agree to limits on greenhouse gases
  – Improving enforcement
    • Allow provisions for trade sanctions
  – Reducing costs of compliance
    • Expand the market for tradable permits
    • Give credits for preventing deforestation
Effect of Global Agreements on National, State, and Local Policy

- International law works from the top down
  - Participating countries agree to change their national laws in accordance with international law
  - National policy affects state and local policy

- In the United States, lack of national policy has given rise to local and state action
  - Ex: State of California, U.S. Mayors Climate Protection Agreement, Regional Greenhouse Gas Initiative
  - Creates a bottom-up approach in which local and state policy influence national policy

- International treaties send a signal for the need for global action on issues such as climate change
Trends of Increasing Demand

- 2003 Carbon Trade valued at $300 million
- 2010 carbon trade value projected to be as much as $44 billion
Much of the demand for emission reduction technology will come from the power industry.
Energy Demand = Capital Demand

- New energy manufacturing technologies are needed to meet expected demand for renewable and efficient energy sources
What can Michigan do to prepare for the next climate treaty?

• Promote private investment in energy research and development

• Participate in regional agreements aimed at attaining emissions standards set by Kyoto

• Create comprehensive and long-term plan for emission reduction
Energy Research
Member countries of the International Energy Agency have long spent more money on technologies like nuclear power than on converting sunlight to electricity.

Total energy research budgets of the agency’s member governments in 2004 dollars

- Other technology
- Nuclear fusion
- Nuclear fission
- Fossil fuels
- Conservation
- Geothermal, wind, water, biomass
- Solar

International Energy Agency
Three Mechanisms for Early Preparation:

1. Utilize Carbon Pricing

2. Set state emission reduction goal

3. Allocate funding to assist firms in research and development of new technology
1.) Carbon Pricing

Two options:
1. Tax emissions
2. Cap emissions, provide credits and promote trade

Increases cost-effectiveness of emissions reductions by firms
## 2.) Emission Reduction Goals

**Under Carbon Tax:**
- Set emission goal
- Adjust tax to reduce cost effectiveness of emitting beyond goal

**Under Cap and Trade:**
- Cap state emissions
- Auction or issue credits to firms
- Allow trading of credits
3.) Allocate R&D Funding

- Implementing new technology has a high initial marginal cost

- Government subsidized R&D will reduce initial costs
Costs will Decrease with Increasing Implementation

Stern Review (2007)
Current Michigan Actions

- Midwest Governors Association
- Mayors Climate Protection Agreement
- Senate Bill No. 1000
- House Bill No. 5549
- House Bill No. 5525
- Governor Granholm’s Proposals
Midwestern Governors Association and the Midwestern Greenhouse Gas Accord

- Promotes the formation of energy efficiency programs by individual Midwestern states
- Supports economic growth and job creation through the promotion of renewable energy and efficient technology industries
- Potentially a regional cap and trade system
Mayors Climate Protection Agreement- 2005

- Organized by Seattle Mayor Greg Nickels.
  - 830 Mayors
  - 50 states
  - 79,535,702 citizens
  - 23 Michigan cities

- Intended to reinforce the goals of the Kyoto Protocol through local leadership and action

- Provides mayors with the guidance and assistance they need to lead their cities efforts to reduce the greenhouse gas emissions that are linked to climate change.

Lansing, East Lansing, Ann Arbor, Kalamazoo, Grand Rapids, Warren

http://www.usmayors.org/climateprotection/list.asp
MCPA Statutes

• Strive to meet or beat the Kyoto Protocol targets in their own communities, through actions ranging from
  ▪ Emissions reduction targets and action plan
  ▪ Public transportation
  ▪ Renewable energy and energy efficiency
  ▪ Land use policies that reduce sprawl
  ▪ Urban forest restoration projects
  ▪ Public information campaigns

• Urge their state governments, and the federal government, to enact policies and programs to meet or beat the greenhouse gas emission reduction target suggested for the United States in the Kyoto Protocol -- 7% reduction from 1990 levels by 2012

• Urge the U.S. Congress to pass the bipartisan greenhouse gas reduction legislation, which would establish a national emission trading system.

http://www.usmayors.org/climateprotection/agreement.htm
Upcoming Legislation in Michigan

• SENATE BILL NO. 1000 - Passed Senate, sent to committee in House, Energy & Technology

Properties owned and operated by State facilities will enter into competitive contracts with renewable energy distributors.

(A) JANUARY 1, 2009, 3%.
(B) JANUARY 1, 2010, 10%.
(C) JANUARY 1, 2020, 20%.
(D) JANUARY 1, 2025, 25%.
House Bill 5549- Rep. Palsrok (R)

- A bill to require certain providers of electric service to establish a renewable energy program
- Utilizes Cap and Trade System with energy credits
  - Credits have a 3 year life-span.
House Bill 5525- Rep. Angerer (D)
Energy Efficiency Program

A bill to establish an energy efficiency program in Michigan:

• Includes electric and natural gas utilities
• Promotes load management
• Prescribes the powers and duties of certain state agencies and officials to impose sanctions
Governor Jennifer Granholm fully endorses Michigan’s economic future of Green Manufacturing:

- Wind turbines
  - Built and operated in MI
- Solar Panels
  - Dow Chemical
- Wave Energy
- Biomass fuels
  - Paper manufacturers using paper pulp for bio-diesel
- R & D in Automotive industry