Design Features of Climate Legislation

The Search for Wise Energy Policy
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Kenneth Richards
School of Public and Environmental Affairs, Indiana University
Smith School of Enterprise and the Environment, University of Oxford
Discussion of Design Features

• Emissions Reduction Targets
• Point and Scope of Regulation
• Cost Containment Mechanisms
• Activities Outside the Cap
• Distribution of Allowances and Auction Revenues
• International Integration
Goal for Climate Change Legislation

To develop a feasible, cost-effective mechanism to reduce greenhouse gas emissions to a specified target level.
Policy Perspective

- Appropriate Targets
Policy Perspective

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• Minimize Costs
Policy Perspective

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  - Cost-effective Abatement (AC)
Policy Perspective

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• Constraints
  – Legal Feasibility
  – Political Feasibility
Policy Perspective

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Minimize AC + PF + IC,
s.t., Environmental, Legal and Political Constraints
Discussion of Design Features

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• International Integration

When we address these design features we are really dealing with elements of our constrained cost-minimization framework and tradeoffs among those elements.
Mechanisms to control abatement costs

- Market-based system (cap-and-trade or taxes)
- Banking and borrowing
- Price cap/safety valve

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Interactions
- Choice of cap and trade may help with political constraints

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Mechanisms to control abatement costs

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• Banking and borrowing
• Price cap/safety valve

Interactions
• Choice of cap and trade may help with political constraints
• When using a safety valve we are implicitly relaxing the environmental constraint should costs be higher than expected

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Mechanisms to Reduce Implementation Costs

• Regulate upstream – natural gas distributors, petroleum refineries, coal mines – to minimize the number of covered entities

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Mechanisms to Reduce Implementation Costs

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Interaction

- Regulating upstream also broadens the coverage providing more opportunities for low-cost emissions reductions.

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subject to, Environmental, Legal and Political Constraints
Further Mechanisms to Control Abatement Costs

- Offset systems to take advantage of low cost carbon sequestration and methane abatement opportunities.

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Further Mechanisms to Control Abatement Costs

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Interactions

• If offset system does not provide sufficient assurance of claimed reduction, the environmental target constraint is not met

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Further Mechanisms to Control Abatement Costs

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Interactions

• If offset system does not provide sufficient assurance of claimed reduction, the environmental target constraint is not met.

Recommendation: Evaluation methods that demonstrate “independent reproducibility” in estimates.

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Mechanisms to Address Public Finance Impacts

- Auction allowances, recycle revenue to General Fund and reduce distortionary taxes

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Recommendation: Recycle the revenues through state treasuries to reduce distortionary state taxes and address regional political interests.

Minimize $AC + PF + IC$, s.t., Environmental, Legal and Political Constraints
Mechanisms to Promote Political Feasibility

• Allocate allowances to electric utilities to reduce impacts on rate payers
• Provide additional electricity and natural gas rate relief measures for low income families
• Reserve portion of allowances for new entries to industries

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• Rate relief and allocations for new industry entrants dulls the price signal the lies at the heart of a market-based system

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Mechanism to Protect the Environmental Target

- Avoid “leakage” by requiring imports from uncapped countries in energy intensive industry to submit allowances on embedded carbon.

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Interactions
• Has important implications for political support from energy-intensive domestic industry

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Mechanism to Protect the Environmental Target

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Interactions
- Has important implications for political support from energy-intensive domestic industry
- Could involve substantial implementation costs to develop and enforce rules

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Mechanism to Protect the Environmental Target

- Avoid leakage by requiring imports from uncapped countries in energy intensive industry to pay a carbon tariff on embedded carbon.

Interactions
- Has important implications for political support from energy-intensive domestic industry
- Could involve substantial implementation costs to develop and enforce rules
- Could conflict with international trade agreements

Minimize $AC + PF + IC$

s.t., Environmental, Legal and Political Constraints
Take Home Lessons - General

- The design of climate legislation involves a web of interactions among cost elements – abatement costs, public finance impacts, and implementation costs – environmental goals and legal and political constraints.

- We should do our best to understand the implications – particularly recognizing when we are compromising one element in pursuit of another.
Take Home Lessons - Specifics

- Auction allowances – recycle revenue to reduce distortionary taxes, protect vulnerable households
- Recycle through state tax systems to address regional political concerns
- Avoid compromising the price signal that lies at the core of the program
- Require offset methods to be tested for independent reproducibility
- Apply controls upstream to reduce implementation costs
A Final Issue

Observation:
“The problem with political jokes is they get elected.”

Corollary:
The problem with policy jokes is they get adopted.
Effect of Delaying Climate Bill

Bill Page Length vs. Months after Bingaman-Specter

Manager’s Amendment

Bingaman-Specter

Lieberman-Warner
Effect of Delaying Climate Bill

- Bingaman-Specter
- Lieberman-Warner
- Manager’s Amendment
- October 2008
- March 2009

Bill Page Length

Months after Bingaman-Specter