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The Outlook for U.S. and International Climate Change Policy

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Climate Change Policy Outlook

United States

- State Cap-and-Trade and Renewable Standards
- National Clean Energy Standard
- EPA Clean Air Act Authority
- Future Climate-Related Policies?

International

- Future of Copenhagen, Cancun, and Kyoto
- G-20 Fossil Fuel Subsidies
- Montreal Protocol and HFCs
- Nagoya and Geoengineering

Research Questions to Inform Policy

US: State Cap-and-Trade Programs

Regional Greenhouse Gas Initiative

- Caps are non-binding
- New Jersey withdrawing from RGGI

California AB32

- Challenge from the right (Proposition 23)
- Challenge from the left (environmental justice)
- One-year delay in implementation

Renewable Electricity Standards

About 30 states have RES or Alternative Energy Std

Significant variation in qualifying technologies

Heterogeneity in ambition of goals

Tradable credits, but lack of market transparency

Alternative compliance payments and cost-based escape clauses

National Clean Energy Standard

2011 State of the Union, 2010 Diverse Energy Std

Technology-neutral vs. categories of qualifying technologies

Ambition of goals

Investment certainty

Political prospects

“Promoting Clean Energy in the American Power Sector” Hamilton Project Discussion Paper 2011-04

Clean Air Act Authority: Mobile

Joint EPA-DOT Car Rule:

- Tailpipe CO_2 and fuel economy standards
- Through 2016, resolved Pavley/automakers dispute
- Roughly equivalent to a 35.5 mpg standard in 2016

Future rules:

- Light-duty vehicles through 2025: 60 mpg?
- Heavy-duty vehicles
- Other transportation modes?

Clean Air Act Authority: Stationary

Best case scenario:

- States implement cap-and-trade or tradable CO_2 performance standards as the best NSPS "system"

Challenges to effective policy design

- NSPS + ESPS (staggered) require integration
- Revenue?
- Cost containment?
- Support for renewables, nuclear?
- Congressional and legal review
- Other Clean Air Act provisions

Future Climate-Related Policies

Carbon Tax: a serious debate on fiscal reform would likely consider revenue raisers and spending cuts

- ~$100 billion per year for an economy-wide tax

Domenici-Rivlin Debt Reduction Tax Force

- CO_2 tax as an alternative to national VAT
- $23/t$CO_2$ in 2018, increasing 5.8%/year

R&D: PCAST and American Energy Innovation Council have called for $16 billion per year

- Increase support for ARPA-E
- Quadrennial Energy Review
- Uses and returns to a ramp-up in R&D funding?

Copenhagen, Cancun, Kyoto

Grand political bargain in Copenhagen

- Mitigation actions by all major economies
- Transparent implementation
- Significant international climate finance

Cancun elaborated implementation of Copenhagen

Kyoto 2nd commitment period?

- Implications for next steps of Copenhagen/Cancun

International community has agreed to a bottom-up, pledge and review system

G-20 Fossil Fuel Subsidies

2009 Pittsburgh G-20 (Singapore APEC)

- *To phase out and rationalize over the medium term inefficient fossil fuel subsidies while providing targeted support for the poorest*
- Call on all nations to phase out subsidies
- Requested analysis by OECD, World Bank, IMF, and OPEC on scope of subsidies and suggestions for implementation

Finance and energy ministers reported on implementation strategies and timelines in 2010

Initial actions taken in several nations to cut subsidies

Future: Montreal Protocol and HFCs

2009 Canada-Mexico-USA Proposal

- Phase-down HFCs in all countries
- Resubmitted proposal in 2010, 2011
- Reduce HFC emissions to 15% of baseline levels by 2033 (2043 for developing countries)
- 90 countries at 2010 Montreal Protocol negotiations signed a declaration calling for a transition away from HFCs

~88,000 MMTCO2e reductions through 2050

Nagoya and Geoengineering

2010 Convention on Biological Diversity decision

- Prohibition on geoengineering that may affect biodiversity until:
  - Global, transparent, science-based control and regulatory mechanisms exist, or
  - Adequate scientific basis exists to justify the activities
- Exception for small scale research studies

Cooperation? Coordination? Information-sharing? on geoengineering among major economies

Research Questions to Inform Policy

What are the additional costs of pursuing a mix of sub-optimal policies, in lieu of an economy-wide carbon pricing regime?

What are the costs and environmental impacts of tradable performance and portfolio standards?

What are the adverse competitiveness impacts of domestic climate change policies?

What are the benefits of mitigating greenhouse gas emissions (i.e., how can we improve estimates of the social cost of carbon)?

Research Questions to Inform Policy

What are the regional costs and benefits of climate policy?

What are the distributional impacts by income of climate policy?

How could a carbon pricing policy play a role in tax and fiscal reform?

How will climate change affect energy demands and thus inform adaptation efforts?

Research Questions to Inform Policy

What are the energy, environmental, economic, and fiscal benefits of phasing down fossil fuel subsidies?

How should we design the institutions that would be necessary to deliver cost-effective global abatement, including through reducing deforestation (i.e., can't we do better than the CDM)?

How does the prospect of geoengineering inform analysis of mitigation policies within the context of long-term temperature goals?

What questions should policy-makers be asking? And how can the modeling community help answer them?