

U.S. and International Climate Change Policy Outlook

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Resources for the Future

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EPRI Global Climate Change Research Seminar

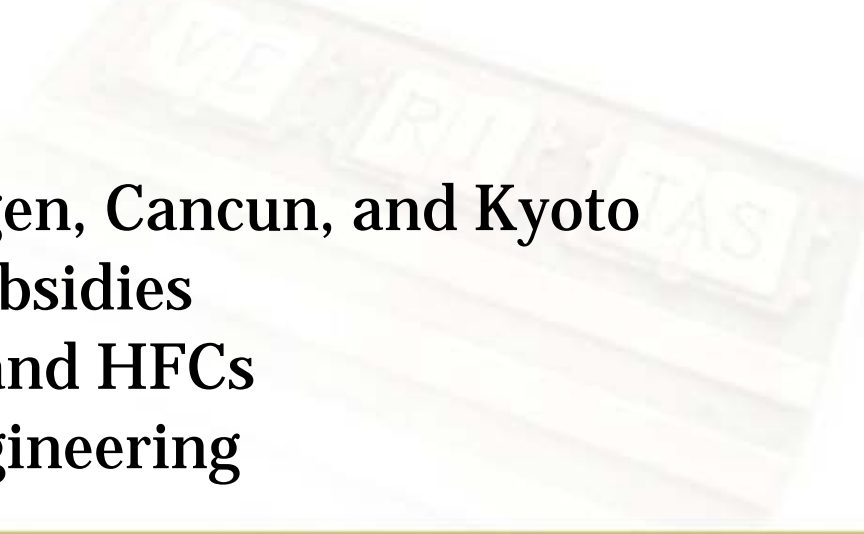
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Climate Change Policy Outlook

United States

- State Cap-and-Trade
- Renewable Electricity 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
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State Cap-and-Trade Programs

Regional Greenhouse Gas Initiative

California AB32

Western Climate Initiative (?)

Midwestern Greenhouse Gas Accord (?)



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

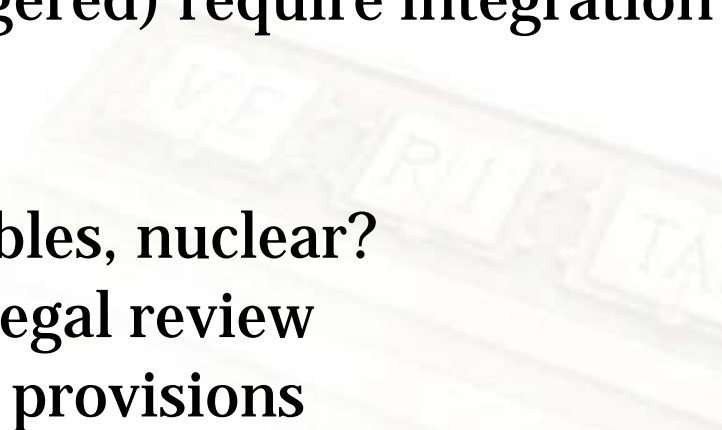


EPA Clean Air Act Authority

Best case scenario:

- States implement cap-and-trade or tradable CO₂ 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
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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

- CO₂ tax as an alternative to national VAT
- \$23/tCO₂ 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
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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

Montreal Protocol and HFCs

2009 Canada-Mexico-USA Proposal

- Phase-down HFCs in all countries
- Resubmitted proposal in 2010, 2011
- Developed countries reduce HFC emissions to 15% of baseline levels by 2033 (start in 2015)
- Developing countries reduce HFC emissions to 15% of baseline levels by 2043 (start in 2017)
- 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



Priority Research to Inform Policy

Mix of sub-optimal policies

Tradable performance and portfolio standards

Competitiveness

Regional and income distributional analysis

Tax reform

Social cost of carbon