The Evolving U.S. Approach to Climate Change Policy

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U.S. Climate Policy Objectives

Policy constraints of Budget Reconciliation as the legislative vehicle
Inflation Reduction Act

- ~$400 billion clean energy subsidies over 10 years
- $270 billion in tax expenditures
  - Power sector: $160+ bn
  - Fuels and vehicles: $35 bn
  - Energy efficiency and residential: $37 bn
  - Clean energy manufacturing: $37 bn
- Spending on energy loan guarantees, low-income communities, diesel buses, land use, etc.
Progress on U.S. Emission Goals: “20-30-40”

- Todays emissions: 2005 -20%
- Current policy by 2030: -30%
- IRA by 2030: -40%
- NDC: -50% to -52%
Uncertainty in Outcomes

- Appropriations vs. credit instruments vs. tax expenditures
- Statutory interpretation, technological change, politics

Lessons from ARRA 2009

Wind Capacity, 2000-2018

Loan Guarantee Credit Subsidies
Industrial Policy:
Illustration of Wind Power Subsidies

Production Tax Credit for renewable power

- $3.4/\text{kWh}$ if project satisfies
  - Wage & apprenticeship
  - Domestic content
  - Energy community
  - Low-income community

- $0.5/\text{kWh}$ if it fails to meet all of these conditions
Markets for Tax Credits

• Most IRA clean energy tax credits are transferable
  ▪ Direct pay provision for a special class of developers

• Transferability intended to address limited supply in tax equity market
  ▪ Reduce the ~15% haircut renewable developers faced when monetizing tax credits through tax equity

• In 2023, this market could > $10 billion
  ▪ What information and institutions are necessary for market efficiency?
Emerging Technology Neutrality

- Starting in 2025, emission-based PTC and ITC
- Hydrogen PTC varies with CO2 intensity of production
- Methane fee on oil and gas operations*
- CCS tax credit (valued per unit of stored carbon)
- Is subsidy design better reflecting the cost-effectiveness we associate with carbon pricing?
Performance Evaluation

- Justice40 Initiative and the need for evaluation
- Program design, data collection, and ex post evaluation
- Learning and policy updating
- Integrate with *Learning Agendas* under the Foundations for Evidence-based Policymaking Act
Regulatory Agenda

- EPA Oil and Gas Methane Proposed Rule
- DOT fuel economy standards, EPA tailpipe CO$_2$ rules
- SEC climate-related disclosure
- EPA power sector regulation (?)
- State actions: California, Pacific Northwest, RGGI
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