

The Evolving U.S. Approach to Climate Change Policy

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U.S. Climate Policy Objectives

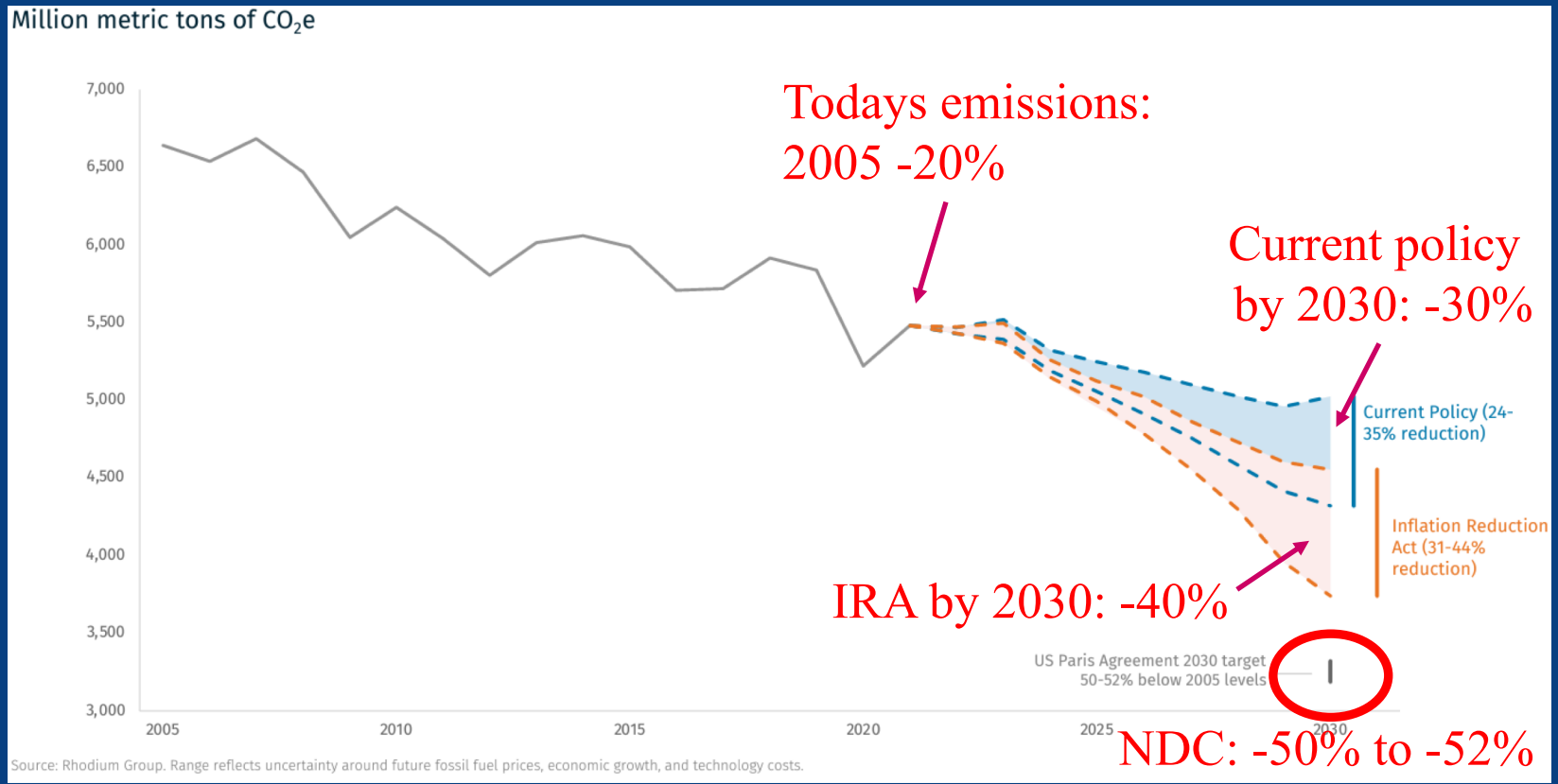


Policy constraints of Budget Reconciliation as the legislative vehicle

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”

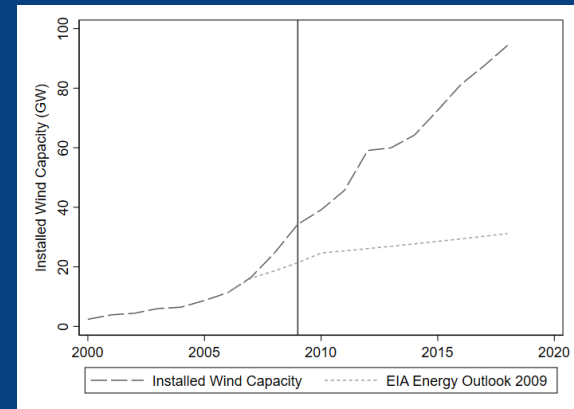


Uncertainty in Outcomes

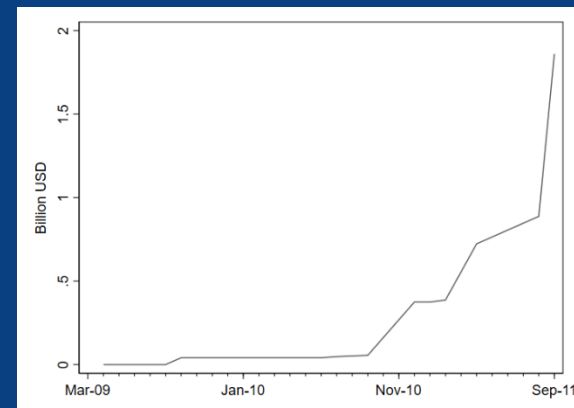
- Appropriations vs. credit instruments vs. tax expenditures
- Statutory interpretation, technological change, politics

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¢/kWh if project satisfies

- Wage & apprenticeship
- Domestic content
- Energy community
- Low-income community

Union

Buy American

Place-based

Policies



- 0.5¢/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 CO₂ rules
- SEC climate-related disclosure
- EPA power sector regulation (?)
- State actions: California, Pacific Northwest, RGGI

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