

RFF's Future of Power Initiative

Substantial reduction of US greenhouse gas emissions will require widespread decarbonization of the power sector and the economy. Experts at RFF are undertaking research and policy engagement activities that holistically evaluate market designs and state and federal policies to facilitate a smooth transition to a decarbonized power sector.

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Resources for the Future has conducted pioneering research on the US power sector for decades, bringing economic insights to bear on electricity markets and government policies. Now, RFF's Future of Power Initiative is helping decisionmakers to transform the 21st century US power sector through four crucial areas of research and engagement:

- 1. Reform of wholesale competitive markets and investment planning in regulated markets:** Markets and regulations that govern electricity transactions and investments are evolving to keep pace with an ever-changing generation mix. The Future of Power initiative's modeling and technical expertise is helping decisionmakers navigate this complex policy area in order to accommodate diverse resources while reliably meeting demand for electricity.
- 2. Accelerated integration of renewables and improved grid flexibility:** The intermittent nature of renewable generation raises concerns for balancing the grid and maintaining reliability. RFF experts are bringing together policymakers, stakeholders, and industry leaders to examine these barriers and explore promising solutions, such as expanded transmission, grid-connected storage, demand anticipation and scheduling, and using smart devices to shift demand in real time.
- 3. System integration of distributed energy and demand side services:** As electricity regulators explore how to adapt to new technologies and evolving customer demands, the Future of Power initiative provides insights to guide regulatory decisions affecting the evolution of distributed energy and demand-side resources and their growing role in electricity markets.
- 4. Economy-wide electrification:** Electrification of the economy will unfold over a longer time horizon than many of the policy issues described above, but current research can inform this future development. The initiative works to identify barriers to electrification and anticipate how markets and institutions might evolve in the coming years.

Our Impact

Future of Power Initiative researchers are working with policymakers across the United States:

- **Participating in Expert Committees:** Karen Palmer serves on a committee of the National Academies of Sciences, Engineering, and Medicine, formed to evaluate the evolving US grid and provide recommendations for federal response.
- **Informing Policy Decisions:** The Federal Energy Regulatory Commission (FERC) cited RFF's analysis when they rejected a proposal to subsidize aging, unprofitable coal plants. Our technical and modeling expertise is helping New York State policymakers assess the implications of pricing carbon in its electricity market with respect to emissions, electricity prices, and existing carbon pricing efforts.
- **Providing Unbiased, Informative Testimony:** Karen Palmer and Kathryn Cleary submitted comments to FERC on the anticipated impacts of PJM's proposal to reform its capacity market that would raise prices and discourage participation of renewables in the market.
- **Bringing Together Industry Experts and Decisionmakers:** The Future of Power Initiative has hosted workshops on [market design for clean energy](#), [grid resilience](#), and [decarbonization policy design](#), among others. State and federal regulators, legislative staff, researchers, private financiers, and other stakeholders attended these workshops.

Positioned for Success

The electricity sector is one of the most intensely studied sectors of the US economy and has attracted interest from an abundance of scholars, policy experts, consulting firms, and NGOs. Within this crowded field, RFF is taking the lead on critical research and policy engagement activities:

- **Unparalleled modeling and analytical capabilities:** With cutting-edge simulation models, we can predict how numerous factors may affect regional electricity markets, interregional electricity trade, and other power sector characteristics.
- **Outstanding credibility as an independent, objective source of economic analysis:** All work is publicly available, and all models have been extensively vetted and peer-reviewed.
- **Long-standing reputation and relationships with policymakers:** RFF researchers have cultivated strong relationships with state energy agencies, utility regulators, governors' offices, and FERC. These decisionmakers regularly approach RFF for expertise and guidance.
- **Exceptional research staff:** For decades, RFF experts have researched electricity regulation and market design and provided important insights about complex regulatory interactions and their consequences.

— more information —



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