

RTOGov: Exploring Links Between Market Decision-Making Processes and Outcomes

Kate Konschnik

Who makes decisions about the electricity that powers your home and business? How does that differ from region to region? Do those differences impact real-world outcomes like price, customer choice, air quality, and innovation?

Before the 1990s, most homes and businesses in the United States had one choice for electricity—a single electric utility with the monopoly franchise in their state or region. That utility owned most of the power plants generating its electricity, the long-distance wires transporting that power, and the local distribution lines and poles. But following the deregulation and restructuring of the telecommunications and railroad industries, Congress directed the Federal Energy Regulatory Commission (FERC) to introduce competition in the electricity sector.

Initially, FERC required monopoly utilities to open their transmission lines for use by third parties.¹ Then, FERC began to urge the formation of Regional Transmission Organizations (RTOs) and Independent System Operators (ISOs) to take control of incumbent utility transmission lines and manage them over larger geographic areas while running competitive auctions for the wholesale sale of electricity. Today, RTOs and ISOs are nonprofit entities

¹ Promoting Wholesale Competition Through Open Access Non-discriminatory Transmission Services by Public Utilities, [FERC Order 888](#), 75 FERC ¶ 61,080 (April 24, 1996).

regulated by FERC as “public utilities” under the Federal Power Act.²

Proponents believed that competitive markets would reduce the market influence of individual power suppliers and promote efficient and reliable electric service.³ “Effective wholesale competition” would also encourage “new entry and innovation.”⁴

“Effective wholesale competition protects consumers by providing more supply options, encouraging new entry and innovation, spurring deployment of new technologies, promoting demand response and energy efficiency, improving operating performance, exerting downward pressure on costs, and shifting risk away from consumers.” – FERC Order 719

² With one exception among the seven existing RTOs/ISOs—the Electric Reliability Council of Texas is regulated by the Texas Public Utility Commission.

³ U.S. Government Accountability Office, [Electric Restructuring: FERC Could Take Additional Steps to Analyze Regional Transmission Organizations’ Benefits and Performance](#), GAO-08-987 (Sept. 2008).

⁴ Wholesale Competition in Regions with Organized Electric Markets, [FERC Order 719](#), 125 FERC ¶ 61,071 (Oct. 17, 2008).

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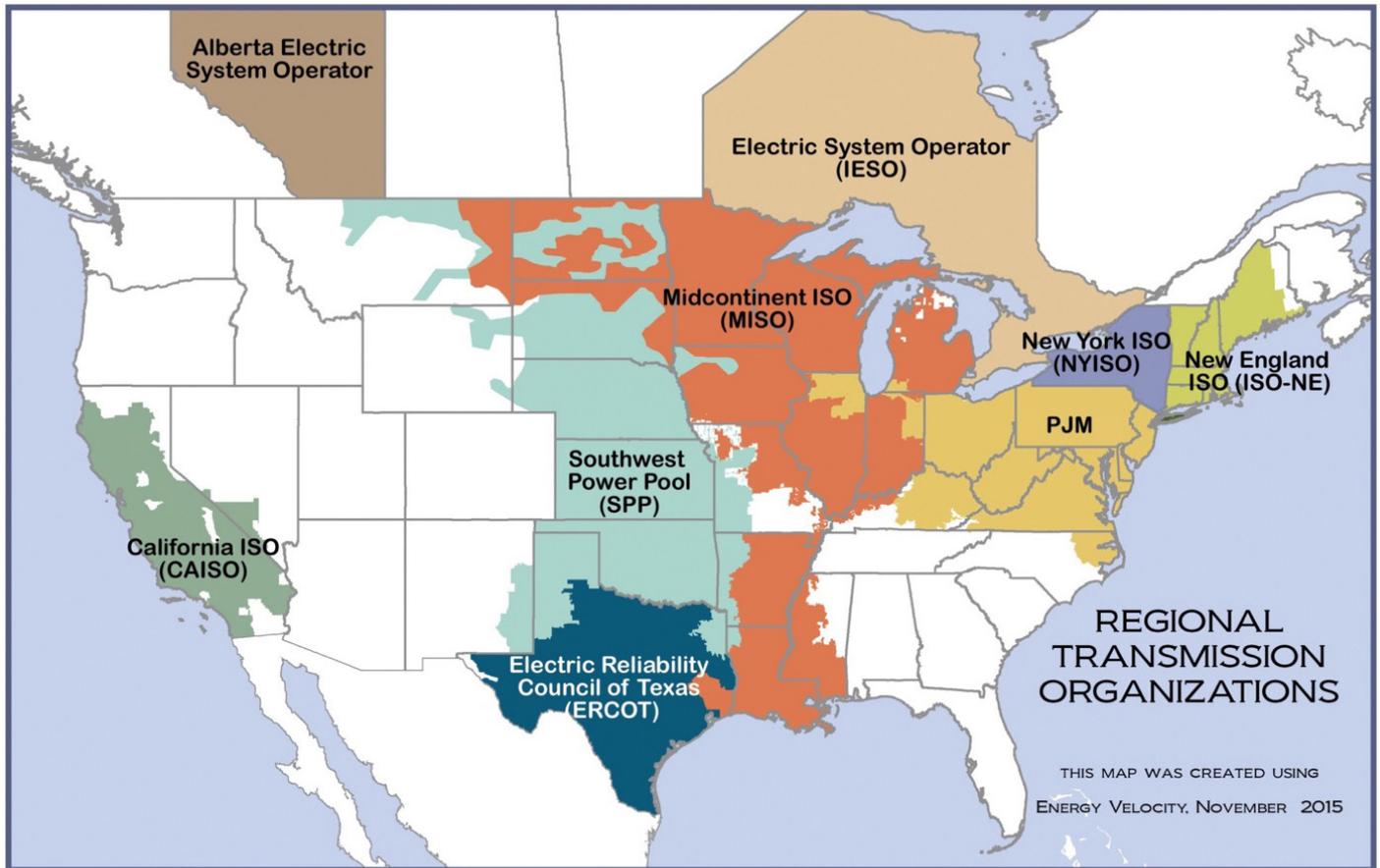
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Notably, FERC did not require the creation of RTOs/ISOs. In fact, many utilities still operate outside of competitive markets, particularly in parts of the Southeast, the Inter-Mountain West, and the Pacific Northwest. Even where markets do exist, FERC never specified the form they must take. Each RTO/ISO writes its own market rules and self-governs with different levels and types of stakeholder engagement. Stakeholders might—or might not—include states, generators, demand response and energy storage providers, consumer groups, large energy users, and environmental groups.

RTOs and ISOs now serve about two-thirds of electricity customers in the United States (Fig. 1). These entities oversee energy markets as well as markets for capacity (future energy) and ancillary services (attributes that support reliability). Therefore, by accident of where you live or work, decision making around the provisioning of electricity may sit with state regulators only or with states and competitive markets, may involve different stakeholders, may be centralized or more diffuse, and may result in different costs, choices, and environmental impacts.

Figure 1. Map of RTOs/ISOs, which now serve two-thirds of all U.S. electricity demand.



Source: FERC

These decision-making processes are largely invisible to us. And yet, for years market stakeholders have argued that RTO governance has real implications for the type of power generated in each region and the price we pay for it. Even as they acknowledge the overall benefits of restructured wholesale power markets, stakeholders raise concerns about a lack of access and low visibility into the decisions that result in new market rules.⁵

⁵ FERC Order 719 (summarizing stakeholder comments); GAO-08-987 (reporting on stakeholder interviews); Stakeholder letter to the PJM Board of Managers (Feb. 9, 2018); NY Regulators Call on FERC to Exempt Energy Storage from NYISO's Mitigation Measures, Utility Dive (Aug. 12, 2019).

The clash of ideas is central to competition but also suggests points of tension—and places to improve markets. In fact, alongside their complaints, stakeholders have suggested reforms, including FERC oversight of RTO/ISO budgets;⁶ direct stakeholder access to RTO/ISO boards; customer satisfaction surveys; evenly divided industry sector representation; disclosure of reasons when an RTO/ISO board deviates from a consensus position of stakeholders; and periodic reviews of decision-making processes.⁷

The last two decades have upended settled expectations about electricity. Natural gas and renewables are now cheaper to build and operate than coal in many parts of the country. New technologies and market actors have exploded on the scene. Stakeholder complaints may reflect legitimate growing pains, as new players run headlong into RTO governance styles and voting structures developed when generation options were narrower and market participants fewer. This potential power imbalance falls in favor of incumbent generation and transmission-owning stakeholders who rely more heavily on nonrenewable fossil fuels. In turn, if markets do not deliver cleaner power, states and large energy consumers may pursue out-of-market policies to support their preferred generation.

Since the late 1980s, FERC has relied on markets to set “just and reasonable” rates. Moreover, FERC has pointed to RTO/ISO stakeholder processes to justify its deference to proposed market rule (tariff) revisions.⁸ The reliance on markets combined with FERC’s deference underscores the critical importance of RTO stakeholder processes to market rules—and we propose, market outcomes.

For nearly 20 years, the United States has been running a grand experiment in the power sector, pursuing different models of electricity regulation in different regions of the country. We have diversity in stakeholder participation and decision-making processes. We also have diversity in electricity pricing, carbon intensity, and receptivity to new goods and services. Are there links between process and outcome? And if so, are there governance best practices that would achieve some consensus-based “good” market results?

“Electricity markets are designed markets. They did not emerge from an unorganized marketplace.”
– Peter Cramton, “Electricity Market Design” (2017)

There is often talk about whether our electricity laws, from state utility commission authorities to the Federal Power Act, should be adapted to match new circumstances. We should ask the same of our markets.



FERC has set generic minimum standards for RTOs, including a requirement for a nondiscriminatory governance structure.⁹ In 2008, FERC set forth four additional principles for stakeholder engagement: inclusiveness, fairness in balancing diverse interests, representation of minority positions, and ongoing responsiveness.¹⁰ While this broad-based, principles-driven approach has allowed RTOs to tailor governance to meet their region’s specific circumstances, it may be time to evaluate these processes for their impact on broader market outcomes.

To be sure, FERC has weighed in periodically to ensure market access for emergent market actors and products; for instance, in Order 719 (directing RTO/ISOs to accept bids from demand response resources and eliminate other barriers) and Order 841 (directing RTO/ISOs to eliminate barriers to participation by energy storage providers). But this is a piecemeal regulatory approach to enabling competition. Might changes to the RTO/ISO decision-making structures absorb change and promote innovation more organically?

⁶ In response to this recommendation, FERC submitted performance metrics for RTOs/ISOs to Congress in 2011. See FERC, [Performance Metrics for Independent System Operators and Regional Transmission Organizations: A Report to Congress in Response to Recommendations of the U.S. Government Accountability Office](#) (April 2011).

⁷ (FERC Order 719; GAO-08-987).

⁸ See, e.g., [FERC Order Rejecting \[Southwest Power Pool\] Tariff Revisions](#), 152 FERC ¶ 61,226 (Sept. 22, 2015).

⁹ FERC Order 888; Regional Transmission Organizations, [FERC Order 2000](#), 89 FERC ¶ 61,285 (Dec. 20, 1999).

¹⁰ FERC Order 719.

The RTOGov project seeks to explore the links between decision-making processes and outcomes in our power markets. How does governance differ across RTOs/ISOs? Are there correlations to be made between these differences and divergent market features? Is there a way to map alternative market outcomes, based on modest changes to stakeholder voting eligibility or the power to propose reforms? For regions of the country contemplating new competitive electricity markets (or expansion of existing markets) what governance features should be adopted or adapted to meet their needs? And finally, is it time for FERC to revisit RTO/ISO governance principles, or provide more direction, to build on lessons learned over 20 years?

Led by researchers at Duke University and funded through a generous grant from the Alfred P. Sloan Foundation, RTOGov is a growing network of researchers exploring the most important decision-making bodies never heard of in the United States. Scholars from institutions such as Boise State, Ohio State, Penn State, Dartmouth, Vermont Law School, and the Colorado School of Mines will penetrate these complex issues and identify best practices to guide internal market governance dialogues as well as FERC oversight. Most of all, RTOGov will test the theory that the RTO decision-making process is not simply abstract formalities, but a powerful influence on electricity market outcomes—and a critical tool, if designed and wielded effectively, for harnessing market forces to deliver affordable, reliable, innovative, and increasingly clean power to America.

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