

REPLACING THE UTILITY TRANSMISSION SYNDICATE’S CONTROL

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Synopsis: Technological progress can topple industry titans. But in the electricity industry, entrenched power can stymie disruptive change by setting rules that block competition and reinforce the status quo. In this paper, I chronicle how regional power sector governance — the decisionmaking processes and structures used to change industry rules — is impeding innovation that could challenge incumbent firms, business models, and technologies. I limit my inquiry to control over electric transmission, the channels of interstate commerce essential for keeping the lights on.

Twenty-five years ago, amidst a seismic industry shift to competition, federal utility regulators (FERC) empowered new entities to coordinate the industry through interstate markets and integrated planning. To receive regulatory approval, these new Regional Transmission Organizations (RTOs) had to demonstrate that their governance was free from industry control. FERC believed that RTO “independence” was necessary to foster confidence in the fairness of RTO transmission service and attract investment to RTO-run markets. The RTO model of procuring reliable power through markets spread quickly. While RTOs have since rewritten industry rules and invented new markets, their governance is unchanged.

I argue that RTO governance is now holding the industry back for the benefit of last century’s power players. The industry is in the early phase of a technological revolution, but the commercial interests and individual entities that held formal power and informal influence in regional decisionmaking processes are largely the same today as they were twenty-five years ago. As a result, regional rules tend to cater to incumbents’ interests, to the detriment of competition, consumers, and innovation. I explain why RTO governance stagnated, detail how the power industry changes its the rules, and outline a path for reform. Despite the drawbacks of RTOs, I contend that independent control over transmission operations and planning is indispensable for moving the industry forward.

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I. INTRODUCTION: POWER SECTOR GOVERNANCE HAS STAGNATED

Stretching from Chicago to New Jersey and down to North Carolina, the PJM region is home to more than sixty-five million people and accounts for 20% of the U.S. economy. The region is powered by an interconnected electricity network that includes nearly 90,000 miles of electric transmission lines. This interstate transmission network moves large energy flows from the region’s 1,400 power plants to cities, neighborhoods, and high energy-using businesses. Maintaining this system cost \$85 billion in 2022, with consumers footing most of those costs.¹

The high-voltage transmission network is the nervous system of the regional power sector that allows coordinated short-term operations and long-term transmission expansion planning. Centralized regional control by a single entity — PJM Interconnection, LLC — keeps the region’s power flowing. The terms, conditions, and availability of PJM’s transmission service substantially affect the price and reliability of electric service and shape the industry’s future. Regional power sector rules determine who can generate and transmit electricity and influence the mix of resources powering the region.

Historically, ownership of transmission came with control over its operations and expansion. By restricting transmission access, transmission-owning utilities

1. PJM INTERCONNECTION, *Summer 2023 Reliability Assessment*, at 2 (Jun. 2023), <https://perma.cc/PT97-4YZJ> (providing data about PJM system); PJM INTERCONNECTION, 2022 Financial Report, at 7 (2023) [Hereinafter PJM Financial Report], <https://perma.cc/WU7Z-HMJN> (providing data about annual PJM billings).

dominated power generation and held smaller municipally and cooperatively owned utilities captive to their terms of service. Today, just seven investor-owned utilities (IOUs) — with a combined market capitalization of \$270 billion — own the vast majority of the PJM region’s transmission.² These longtime allies share the same distinctive business model that depends on a state-granted monopoly to facilitate local transmission dominance. Given this concentrated ownership, peculiar industry composition of cooperating monopolists, lack of competition among these dominant firms, and transmission’s “strategic importance” for industry development,³ it is imperative that the public be protected from mismanagement and exploitation by transmission owners.

This article is about how PJM and other regional power systems change the rules that govern transmission operations and expansion planning. I show that IOUs and other incumbent firms exercise formal authority and can exert informal influence in decisionmaking processes that develop regional market and transmission rules. These firms have incentives and opportunities to stack the rules against new entrants that might threaten their dominant positions and undermine their business models.

Regional Transmission Organizations (RTOs), such as PJM Interconnection, are responsible for ensuring reliable operations and planning transmission development across more than half of the country. RTOs are private corporations staffed by engineers, economists and other industry experts. RTOs provide highly technical transmission and market administration services on a non-profit basis to their member utilities, power plant owners, energy traders, and other market participants. The advent of RTOs twenty-five years ago marked a radical departure for the electric utility industry. For decades, IOUs used their control over transmission networks to dominate smaller non-profit utilities. An RTO’s primary purpose was to replace the IOUs’ anti-competitive practices with non-discriminatory transmission service that would enable new power plant developers to participate in interstate electricity markets and allow power prices to be set through competition.⁴ For RTOs to succeed, RTO governance — the decisionmaking processes and structures used to change market and transmission rules — would have to prevent IOUs and other parties from capturing the RTO in order to advance their interests at the expense of competition and consumers.

To protect against this risk, the Federal Energy Regulatory Commission (FERC) requires RTOs to employ “a decision making process that is *independent of control by any market participant* or class of participants.”⁵ This “independence principle,” however, has not prevented RTO governance from favoring incumbent

2. On May 18, 2023, the market capitalizations of American Electric Power, Duke, Dominion, Public Service Gas & Electric, FirstEnergy, PPL, and Exelon totaled \$270 billion. According to FERC Form 1 data, these utilities dominate transmission ownership in PJM.

3. FEDERAL POWER COMMISSION, 1964 NATIONAL POWER SURVEY, at 27 (1964) (“The strategic importance of transmission is much greater than indicated by its 10 percent average share in the overall cost of electricity.”).

4. See *infra* notes 85–91 and accompanying text.

5. 18 C.F.R. § 35.34(j)(1)(ii) (1999) (emphasis added).

firms, technologies, and business models.⁶ As leading scholars on this topic have observed, RTO governance is “designed around legacy technologies” and has an “endemic bias against new resources that threaten incumbent profits.”⁷ Compounding the RTO’s bias against new entrants and new technologies, transmission-owning IOUs can make regional decisions that supersede RTO actions. With this unilateral authority, IOUs have imposed rules that insulate their investments from competition, wall-off transmission development from outside firms, raise costs for new entrants, and prevent other firms from wielding the IOUs’ formal power in regional decisionmaking processes.⁸

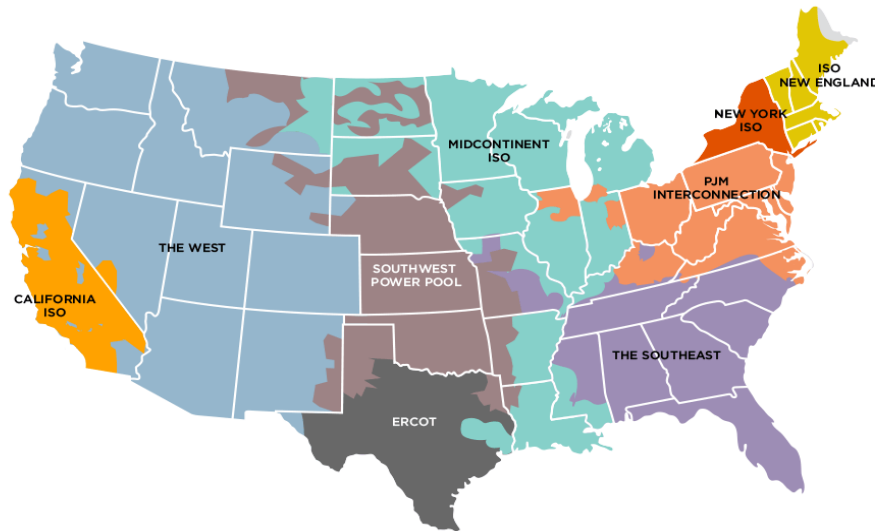


Figure 1: Map showing RTO territories and non-RTO areas.⁹

FERC has countered pro-incumbency biases by forcing RTOs to eliminate various rules that blocked technology deployment and hindered new business models.¹⁰ But FERC has failed to connect the dots. Its approach treats each

6. Stephanie Lenhart & Dalten Fox, *Structural Power in Sustainability Transitions: Case Studies of Energy Storage Integration into Regional Transmission Organization Decision Processes*, 3 FRONTIERS IN CLIMATE, at 21 (2021) [hereinafter Lenhart & Fox on Structural Power] (RTO governance is “designed around legacy technologies” and “not aligned with new market participants and interests.”).

7. Shelley Welton, *Rethinking Grid Governance for the Climate Change Era*, 109 CALIFORNIA L. REV. 209, 216 (2021) (“[T]he central flaw in RTO governance [is] an endemic bias against new resources that threaten incumbent profits.”).

8. See parts V.A, V.C.

9. Map created by Sustainable FERC Project and posted at sustainableferc.org. Note that ERCOT is regulated by Texas and not by FERC. I do not discuss ERCOT in this paper.

10. See, e.g. Order No. 719, *Wholesale Competition in Regions with Organized Electric Markets*, 125 FERC ¶ 61,071 at P 16 (2008) (“eliminat[ing] barriers to the participation of demand response . . . by ensuring comparable treatment of resources”); Order No. 1000, *Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities*, 136 FERC ¶ 61,051 (2011) (ordering RTOs to delete tariff provisions that grant incumbent utilities the right to build any RTO-planned project within their state-granted service territory and requiring that regionally cost allocated projects be developed through competitive processes open to non-incumbent developers); Order No. 841, *Electric Storage Participation in Markets Operated by*

discriminatory rule as an isolated incident, rather than tracing them all to faulty governance that perpetuates the status quo. As a result, RTOs continue to slow-walk innovation and let IOUs and other incumbents dictate the pace of technological progress.¹¹

I argue that RTOs' apparent reluctance to harm incumbents' pecuniary interests or undercut entrenched practices stems from their own stagnant governance as well as their incomplete control over regional power sector rules. Last century's power players have too many seats at the table. Their outsized influence creates bureaucratic inertia that can keep out-of-date rules in place and constrains the industry's technological potential. But the larger problem is that transmission-owning IOUs can circumvent and subvert regional decisionmaking processes, which diminishes the RTO's control and threatens its impartiality.

In a previous article, I explained how FERC attempted to restrain IOUs' regional dominance in order to facilitate competition in wholesale power markets and transmission development.¹² I detailed how FERC's regulation of transmission service forced IOUs to end long-standing exclusionary regional alliances and led to the formation of RTOs. Here, I build on that history and focus on FERC's oversight of regional governance, or the processes that RTOs, IOUs, and other parties use to change market and transmission rules.

FERC regulation of utility alliances dates back half a century when the Commission began applying utility law's prohibition against undue discrimination to regional IOU agreements. From 1996 to 2002, FERC promoted and even proposed to mandate independent governance led by an RTO or other entity that has no financial stake in market participants. FERC believed that independent control of transmission operations and planning was essential for opening the closed IOU-run power systems to new entrants and allowing prices to be set through competitive markets. But by 2005 FERC abandoned its proposed mandate, and it has never meaningfully reformed independent governance. I examine this history to explain why FERC hastily discarded its governance agenda and show how its demise provides FERC with a pathway for governance reforms.

Regional Transmission Organizations and Independent System Operators, 162 FERC ¶ 61,127 at P 1 (2018) (finding that RTO market rules present “barriers . . . to the participation of electric storage resources” and ordering RTOs to adopt new rules); Order No. 2222, *Participation of Distributed Energy Resource Aggregations in Markets Operated by Regional Transmission Organizations and Independent System Operators*, 172 FERC ¶ 61,247 at P 1 (2020) (finding that RTO market rules present “barriers . . . to the participation of distributed energy resource aggregations” and ordering RTOs to adopt new rules); Order No. 881, *Managing Transmission Line Ratings*, 177 FERC ¶ 61,179 at P 20 (2021) (finding that “the potential inability of RTOs/ISOs to automatically accept and use [Dynamic Line Ratings] provided by transmission owners may prevent RTO/ISO markets from benefiting from the more accurate representation of current RTO/ISO system conditions” and ordering RTOs to update their systems).

11. See, e.g., Midcontinent Independent System Operator (MISO), Compliance Filing Transmittal Letter, Docket No. ER22-1640, at 33 (Apr. 14, 2022) (proposing to implement FERC's rule on distributed energy resources by early 2030, nearly a decade after FERC issued the rule, a delay attributable in part to the need to “replace[] MISO's legacy systems and software”); see also MISO, Congestion Cost Reconfiguration Process (Jun. 30, 2023), <https://perma.cc/7LAC-STFY>. On June 30, 2023, MISO announced it would allow market participants to request the use of an advanced transmission technology that can improve transmission efficiency. But MISO's rules allow generation or transmission owners to veto any implementation. In other words, owners of legacy assets set the pace of innovation; see also notes 52–76 and accompanying text.

12. Ari Peskoe, *Is the Utility Transmission Syndicate Forever*, 42 ENERGY L. J. 1 (2021) [hereinafter *Utility Transmission Syndicate*].

While I am critical of existing governance arrangements, I contend that regional technocracy led by an RTO is superior to direct control by each IOU. First, the foundational purpose of an RTO is to prevent for-profit transmission-owners from providing discriminatory service that favors their own interests over their competitors and consumers.¹³ FERC regulates transmission terms and conditions in an attempt to ensure that service is fair and allows for competition.¹⁴ But FERC-regulated service is ultimately administered by a transmission provider, not FERC, which has discretion in how it implements the rules. So long as an IOU is the transmission service provider, FERC has acknowledged that its rules cannot assure against anti-competitive conduct.¹⁵ Structural remedies, such as independent governance that separates transmission ownership from its control, are more effective at enabling new entry and facilitating competition than IOU-provided service.¹⁶

Second, regional governance, as compared to local control by individual IOUs, is consistent with the industry's economics and engineering.¹⁷ Coordinated operations and planning over a larger geographic area takes advantage of resource diversity, varying consumption patterns, and different weather.¹⁸ Regionalization

13. See, e.g., Notice of Proposed Rulemaking, *Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities, Recovery of Stranded Costs by Public Utilities*, FERC Stats. & Regs. ¶ 17,665, 60 Fed. Reg. 17,662, 17,665 (Apr. 7, 1995) [hereinafter Order No. 888 NOPR]:

Utilities owning or controlling transmission facilities possess substantial market power; that, as profit maximizing firms, they have and will continue to exercise that market power [] to maintain and increase market share, and will thus deny their wholesale customers access to competitively priced electric generation; and that these unduly discriminatory practices will deny consumers the substantial benefits of lower electricity prices.

14. *Infra* part IV.B.

15. See, e.g., Order No. 2000, *Regional Transmission Organizations*, 89 FERC ¶ 61,285, at pg. 38 [hereinafter Order No. 2000] (critiquing its Open-Access Rules because they “attempt [to] control behavior that is motivated by economic self-interest through the use of standards of conduct [which] will require constant and extensive policing and requires the Commission to regulate detailed aspects of internal company policy and communication”); Order No. 890, *Preventing Undue Discrimination and Preference in Transmission Service*, 118 FERC ¶ 61,119 at P 26 (2007) (concluding that where its rules “left the transmission provider with significant discretion,” IOUs retain “both the incentive and the ability to discriminate against third parties”); *id.* at P 68 (explaining that “discretion is a significant problem” for IOU determinations of available transmission capacity for third parties because the relevant calculations “vary greatly depending on the criteria and assumptions used [which] may allow the transmission provider to discriminate in subtle ways against its competitors”).

16. FERC, Working Paper on Standardized Transmission Service and Wholesale Electric Market Design, Docket No. RM01-12, at p. 23 (Mar. 15, 2002) (“Structural solutions to mitigate market power are generally more effective than behavioral mitigation. RTOs and independent transmission operators are structural mitigation for vertical market power because they remove the control of transmission access from transmission companies that also compete in generation markets.”).

17. See, e.g., Order No. 2000, *supra* note 15, at pg. 16 (“Virtually all commenters support the NOPR's premise that engineering and economic inefficiencies exist in the operation, planning and expansion of the regional transmission grid and that these inefficiencies hinder electric system reliability and a fully competitive bulk power market.”); 1964 NATIONAL POWER SURVEY, *supra* note 3, at 1 (providing “an outline for the coordinated growth of the industry” in order to unlock the “enormous potential benefits of a truly integrated system of power supply”); U.S. DEPT. OF ENERGY, NATIONAL TRANSMISSION GRID STUDY, at 8 (2002), <https://perma.cc/F6YN-SLV2> (“Robust and reliable regional electricity transmission systems are the key to sustaining fair and efficient competition in wholesale markets that lowers costs to consumers. . . . The transmission systems of tomorrow must be built by relying on open regional planning processes . . .”).

18. See, e.g., James McCalley et al., *Wide Area Planning of Electric Infrastructure: Assessing Investment Options for Low-Carbon Futures*, 15(6) IEEE POWER & ENERGY MAG. 83, 84 (Nov.–Dec. 2017), (discussing “meteorological influences” and “load diversity benefits”).

reduces the amount of needed generation capacity, enables more efficient power plant dispatch and system operations, and lessens the potential for market manipulation.¹⁹ Uniform rules across the region administered by a single entity reduce transaction costs and increase trading.²⁰ Regional entities are also better positioned to coordinate across regions than individual utilities. The benefits of regionalization are well understood and widely accepted.²¹

Third, RTOs provide market participants and stakeholders with far more transparency about system operations and planning than IOUs. For instance, energy market prices and other publicly available data released by RTOs reveal where infrastructure investments can relieve persistently high prices. Transmission congestion costs reflect network constraints and are a metric for evaluating the effectiveness of new operational and planning methodologies and potential network expansions. IOUs outside of RTOs resist any public accountability about their interstate operations by monopolizing information about their networks.²² Non-RTO IOUs can disregard industry-standard operational and planning practices that might expose their inefficiencies and highlight opportunities for innovation.²³

Fourth, allowing monopolists to set the pace of technological change is not a recipe for innovation.²⁴ In general, without competitive pressures, monopolists have little reason to innovate because they are shielded from new entrants with different business models or technologies. The utility business model of government-set, cost-of-service rates provides weak incentives for innovation.²⁵

19. Patrick R. Brown & Audun Botterud, *The Value of Inter-Regional Coordination and Transmission in Decarbonizing the US Electricity System*, 5 JOULE 115 (Jan. 20, 2021) (modelling the U.S. power sector and showing that increased transmission reduces the total capacity of generation capacity needed to maintain reliability); William W. Hogan, *Interregional Coordination of Electricity Markets*, FERC Docket No. PL01-5, at 10 (Jun. 19, 2001) (listing various benefits of larger markets).

20. Order No. 2000, *supra* note 15, at pg. 37.

21. ALEXANDRA VON MEIER, *ELECTRIC POWER SYSTEMS: A CONCEPTUAL INTRODUCTION* 144-47 (2006).

22. *See* Comments of Southern Company Services, FERC Docket No. RM20-16, at 4-5 (Mar. 22, 2021) (explaining that IOUs that are not RTO members do not calculate transmission congestion and therefore “many of the market benefits that have been associated with the use of [non-static line ratings] would not apply to a non-RTO . . .”).

23. For instance, the IOU-run regional planning process in Florida does not consider how transmission expansion can reduce energy production costs by allowing less expensive generation to deliver more power. *Tampa Electric Co., et al.*, 148 FERC ¶ 61,172, at PP 305, 406, 420 (2014).

24. Economics literature explains why monopolists are less innovative than competitive firms. *See, e.g.*, Kenneth Arrow, *Economic Welfare and Allocation Resources for Invention*, in *THE RATE AND DIRECTION OF INVENTIVE ACTIVITY: ECONOMIC AND SOCIAL FACTORS*, NAT’L BUREAU COMMITTEE FOR ECON. RSCH., COMMITTEE ON ECON. GROWTH OF THE SOC. SCI. RSCH. COUNCIL, 609 (1962), <https://perma.cc/U4RT-QJS2>; F.M. Scherer, *Technological Innovation and Monopolization*, (Harv. Univ. Working Paper No. RWP07-043 (Oct. 2007), <https://www.hks.harvard.edu/publications/technological-innovation-and-monopolization>); Thomas J. Holmes et al., *Monopoly and Incentive to Innovate When Adoption Involves Switchover Disruptions*, 4 AM. ECON. ASS’N 1 (Aug. 2012). Utility restructuring, which is discussed in Part III.b, was in part an effort to encourage innovation in power generation. *See, e.g.*, Paul L. Joskow, *Electricity Sector Restructuring and Competition: Lessons Learned*, 40 INSTITUTO DE ECON., PONTIFICIA U. CATOLICA DE CHILE 548, 549 (Dec. 2003).

25. Ken Costello, *A Primer on R&D in the Electric Utility Sector*, NAT’L. REGUL. RESEARCH INSTITUTE, at 23-26 (May 2016), <https://perma.cc/B2EQ-DXP8>; Elisabeth Gaffey & Steven Kihm, *Does Disruptive Competition Mean a Death Spiral for Electric Utilities?*, 35 ENERGY L. J. 1, 10 (2014) (stating that cost-of-service rates “encourage primarily backward-looking, defensive positioning to protect past infrastructure

With a conservative industry culture and lack of financial incentives,²⁶ IOUs have little reason to deploy technologies or employ operational and planning practices that improve transmission efficiency or enhance energy trading, despite potential consumer benefits. Their incentives favor stagnation over innovation.²⁷ That's not to say that IOUs never innovate,²⁸ but rather that they judge innovation by its effects on their century-old business model and regional dominance.²⁹

Handing control back to IOUs is not the answer. The lingering question from my investigation into regional governance is whether RTOs have the potential to be a counterweight to entrenched power. If RTO operations and planning are destined to be constrained by monopolists, should Congress dismantle RTOs in favor of more radical reforms? For instance, some progressives favor a “public

investment.”); Joshua C. Macey and Jackson Salovaara, *Rate Regulation Redux*, 168 U. PA. L. REV. 1181, 1198–99 (2020) (explaining how rate regulation dampens innovation); Jessica Lau and Benjamin F. Hobbs, *Electricity Transmission System Research and Development: Economic Analysis and Planning Tools*, U.S. DEP'T. OF ENERGY, at 15 (Apr. 2021), <https://perma.cc/E2FX-GLTA> (“[R]egulated monopoly utilities have difficulty responding to technology innovation and consumer desires [and] much of utilities’ inability to respond is a result of rate-of-return regulation and the associated business models that utilities have . . .”); Carlos Anchondo et al., *EPA says carbon capture is within reach. Utilities aren't biting*, E&E NEWS (Jul. 11, 2023), <https://perma.cc/SZQ5-R4VB> (quoting a top executive of the IOUs’ trade association saying “This is an industry that is not generally incentivized to work with emerging technologies. Our regulatory structure does not love the risk involved in new technology.”).

26. See, e.g., Alexandra von Meier, *Occupational Cultures as a Challenge to Technological Innovation* 46 IEEE Transactions on Engineering Management 101 (1999) (examining why “new techniques for production or operation aimed at increasing efficiency” at electric utilities may fail due to “conflict and lack of acceptance within the organization”); RICHARD F. HIRSH, *POWERING AMERICAN FARMS: THE OVERLOOKED ORIGINS OF RURAL ELECTRIFICATION* 7 (2022) (summarizing historian Thomas Hughes’ understanding that electric power systems are “sociotechnical systems” are more than their component parts but also “also reflect considerations described as cultural, economic, financial, political, legal, educational, and regulatory,” and that this understanding “emphasizes the importance of corporate and institutional cultures and reduces the explanatory power of engineering concerns alone”).

27. RICHARD F. HIRSH, *POWER LOSS: THE ORIGINS OF DEREGULATION AND RESTRUCTURING IN THE AMERICAN ELECTRIC UTILITY SYSTEM* 52, 55 (1999) (concluding that the electric utility industry is rooted in intentional “technological stasis,” as IOUs “strove to maintain control by encouraging development of conservative inventions — technologies that preserved the existing system”); see also RICHARD F. HIRSH, *Consensus, Confrontation and Control in the American Electric Utility System: An Interpretive Framework for the Virtual Utility Conference*, in *THE VIRTUAL UTILITY* (Shimon Awerbuch et al. eds., 1997) (“Utility managers . . . won dominance relatively early in the 20th century over a system that could be considered “closed” by Hughes. In other words, managers created a system that effectively no longer felt the outside environment — a situation in which ‘managers could resort to bureaucracy, routinization, and deskilling to eliminate uncertainty — and freedom.”) (quoting Thomas P. Hughes, *The Evolution of Large Technological Systems*, in *THE SOCIAL CONSTRUCTION OF TECHNOLOGICAL SYSTEMS: NEW DIRECTIONS IN THE SOCIOLOGY AND HISTORY OF TECHNOLOGY* (Wiebe E. Bijker et al. eds., 1987)).

28. Anjan Bose & Thomas J. Overbye, *Electricity Transmission Research and Development: Grid Operations*, U.S. DEP'T OF ENERGY, at 10 (Apr. 2021), <https://perma.cc/8654-L7PS> (“What is currently taking place in control rooms associated with [utilities] and RTOs is, to a large extent, a realization and significant extension of a vision that was presented more than 50 years ago in and entails an impressive array of rapid measurements, communication, and analysis.”).

29. For instance, PacifiCorp, which owns utilities whose service territories span parts of six Western states, has implemented dynamic line rating at a facility in Wyoming. The line connects PacifiCorp-owned wind generators and a PacifiCorp-owned coal plant. PacifiCorp Compliance Filing, New Wind and Transmission Project Quarterly Update, Oregon PUC Docket No. LC 67 (Sep. 1, 2020). A control scheme integrates the wind and coal generation. Under various conditions, coal or wind generation may need to be shed in order to maintain stability. Rikin Shah, et al., *Upgrading PacifiCorp's Jim Bridger RAS to Include Wind Generation*, Presented at the 48th Annual Western Protective Relay Conference (Oct. 19–21, 2021), <https://perma.cc/YC6C-RM6J>.

option” where government directly controls investment and operational decisions.³⁰ At the other end of the spectrum, it’s possible to imagine a franchise model that awards RTO functions and transmission development opportunities to a non-incumbent firm through a competitive process.³¹ Either approach would attempt to disentangle regional operations and planning from entrenched interests and would likely require Congressional action to implement.

While I briefly discuss Congressional reforms at the end of the paper, I focus my policy proposals on legally defensible reforms that FERC can implement. My suggestions are premised on FERC renewing a dormant policy that provides independently run system operators with greater flexibility in complying with FERC’s transmission rules. By differentiating between FERC-certified RTOs and IOUs in its rules, FERC can induce governance reforms that empower stakeholders, such as state regulators, and non-incumbent firms.

The rest of the paper proceeds as follows. In part II of this paper, I connect regional decisionmaking to power sector innovation and argue that existing governance arrangements are impeding innovation in transmission operations and planning. In part III, I explain tariff “filing rights” and their significance to regional transmission governance. In part IV, I review FERC’s oversight of regional governance, trace the origins of FERC’s “independence” principle that pervades RTO governance, and explain why FERC abandoned its governance agenda. I also show that regional governance controlled by IOUs prioritizes IOUs’ financial and strategic goals. In part V, I document the formal mechanisms through which incumbent asset owners in RTOs, and particularly IOUs, interfere with efficient regional operations and transmission expansion planning. Finally, in part VI, I suggest reforms aimed at neutralizing incumbents’ advantages in decisionmaking processes.

II. POWER SECTOR INNOVATION HINGES ON GOVERNANCE REFORMS

The world’s largest machine is getting an upgrade.³² Our electric power systems are in the midst of a “significant transformation” characterized by wide deployment of fast-acting devices that inject energy and support system stability.³³

30. Welton, *supra* note 7, at 273–74 (summarizing a proposal by the advocacy organization Public Citizen that FERC create publicly owned corporations to own and manage transmission and noting that some European countries have a similar model but cautioning that this model likely requires Congressional action).

31. See Harold Demsetz, *Why Regulate Utilities?* 11 J. OF L. AND ECON. 55 (Apr. 1968).

32. See, e.g., PHILLIP F. SCHEWE, *THE GRID: A JOURNEY THROUGH THE HEART OF OUR ELECTRIFIED WORLD 1* (2007) (“Taken in its entirety, the grid is a machine, the most complex machine ever made. The National Academy of Engineering called it the greatest engineering achievement of the 20th century. It represents the largest industrial investment in history.”); Chris Martin et al., *America’s Power Grid*, BLOOMBERG NEWS (Jan. 21, 2020), <https://perma.cc/N43G-LAF4> (“The biggest machine on Earth delivers more than \$400 billion of electricity a year across nearly 7 million miles of transmission and distribution lines. . . . It’s also an aging dinosaur that sorely needs an upgrade to its more than \$1 trillion in infrastructure.”).

33. N. Hatzigryriou et al., *Definition and Classification of Power System Stability – Revisited & Extended*, 36 IEEE TRANSACTIONS ON POWER SYSTEMS 3271 (July 2021) (“[E]lectric power systems worldwide have experienced a significant transformation, which has been predominantly characterized by an increased penetration of power electronic converter interfaced technologies. Among these new technologies are wind and photovoltaic generation, various storage technologies, flexible ac transmission systems (FACTS), High Voltage Direct Current (HVDC), lines, and power electronic interfaced loads.”).

To harness the capabilities of these resources and adapt to their limitations, system operators must overhaul transmission operations and planning.³⁴

Transmission operations and planning were once handled almost exclusively by transmission-owning utilities with state-granted monopolies over local delivery. Their primary task was balancing the energy generation of steam-powered turbines with ever-changing consumer demand.³⁵ Maintaining this equilibrium across a transmission network keeps the system running smoothly. Utility management also planned transmission expansion to connect new power plants that would allow the utility to meet growing consumer demand.³⁶ Although operational and planning methods are now more sophisticated, they are rooted in outdated assumptions and fail to harness 21st century grid technologies.³⁷

System operators now have a larger set of tools for supporting system stability, including employing small-scale resources connected to local distribution systems,³⁸ extending across regions to import energy from

34. Y. Sun et al., *Research Priorities and Opportunities in the United States Competitive Wholesale Electricity Markets*, NAT'L RENEWABLE ENERGY LAB., at 1.1 (May 2021), <https://perma.cc/R92B-2VNR> (“The power system is currently undergoing rapid changes. . . . These changes will likely require more advanced communication and control capabilities, as well as . . . a more holistic approach for energy system planning and operation to ensure system reliability and resilience.”); Amirhossein Sajadi et al., *Synchronization in Electric Power Networks with Inherent Heterogeneity up to 100% Inverter-Based Renewable Generation*, 13 NATURE COMM'N 2490 (2022) (“[I]t is pivotal to reconsider the control and automation systems currently in place, both the structure and algorithms, and perhaps design and implement modern control systems that are designed and tuned in accordance with the dynamic behaviors and characteristics of power networks with high levels of inverter-based generation.”); Jeff Dagle & Dave Schoenwald, *Electricity Transmission System Research and Development: Automatic Control Systems*, U.S. DEP'T OF ENERGY, at 6 (Apr. 2021), <https://perma.cc/96GK-LBXS> (“A key challenge in the near future will be developing advanced control schemes that can harness the system-level benefits of these fast-acting technologies.”); Chris O'Reilly et al., *Electricity Transmission System Research and Development: Hardware and Components*, U.S. DEP'T OF ENERGY, at xii (Apr. 2021), <https://perma.cc/TL9D-UMCV> (“With proper planning and design, power electronic systems can offer the grid significant flexibility and rapid response.”); Alexandra von Meier & Laurel N. Dunn, *Empiricism and Collaboration on Grid Data Analytics: The Need for a New Information Ecosystem*, 1 ACM SIG ENERGY INFORMATICS REVIEW 89 (Nov. 2021) (discussing a “fundamental shift in modern grids [of] increasing temporal and spatial dependency among components,” finding that fast-acting decentralized resources can add value, and concluding that “data-driven tools will play an increasingly prominent role in grid operations and planning, as physical properties and dynamics of the grid evolve in the face of new technology adoption”).

35. Paul L. Joskow, *Challenges for Wholesale Electricity Markets with Intermittent Renewable Generation at Scale: The U.S. Experience*, at 13-15 (MIT Working Paper No. 2019-001, 2018) (summarizing the “classic model” of system operations whereby a utility identified the optimal investment mix of resources based on their operating and capital costs and operating parameters and then dispatched those generators based largely on their short-run marginal operating costs).

36. Charles G. Stalon & Reinier H.J.H. Lock, *State-Federal Relations in the Economic Regulation of Energy*, 7 YALE J. ON REGUL. 427, 460 (observing that “states traditionally have taken relatively little interest in transmission facility planning. . . [and] additions typically have been viewed by utility planners and state regulators as adjuncts to the much larger generation investments”); Joseph Eto & Bernard Lesieutre, *Transmission-Planning Research & Development Scoping Project*, LAWRENCE BERKELEY NAT'L LAB., at 3 (Jul. 2004), <https://perma.cc/DK2H-R6YJ> (“In the past, utilities planned transmission jointly with generation.”).

37. Bose & Overbye, *supra* note 28, at 10; *id.* at 31-34 (explaining that current planning methods are not appropriate for rapidly changing systems); Lau & Hobbs, *supra* note 25, at 17 (“Much of the electric power industry continues to rely on legacy [planning] processes to create a stable operational and financial environment . . . these legacy planning practices are reaching the point of being outdated . . .”).

38. Carmine Rodio et al., *Optimal Dispatch of Distributed Resources in a TSO-DSO Coordination Framework*, IEEE 2020 AEIT International Annual Conference (Sep. 2020), <https://perma.cc/2LPZ-TU5X>

neighboring networks,³⁹ and optimizing network topology with advanced software and remotely controlled switches.⁴⁰ These and other tools will provide system operators with flexibility and optionality as they seek the most cost-effective means to maintain reliability amid rapidly shifting conditions.⁴¹ Advanced technologies and practices can add additional value by accelerating new entry in

(“Distributed generators, interruptible loads and storage systems, which are usually considered as DERs, can be employed as flexibility resources for power system operation, and therefore be exploited to solve grid congestions, provide voltage regulation and power quality services. Currently, such services are traditionally managed by TSOs through the control of traditional power plants, whereas distribution networks play a limited passive role in power system management, since both energy consumption and generation of DERs at distribution level are not yet optimized, nor coordinated with the overall system.”); Sun et al., *supra* note 34 (“Controllable loads and storage . . . can be called upon to help balance supply and demand at the system scale . . .”).

39. Dev Millstein et al., *Empirical Estimates of Transmission Value Using Locational Marginal Prices*, LAWRENCE BERKELEY NAT’L LAB. (Aug. 2022), <https://perma.cc/NDV6-FP3K> (using energy market prices to estimate the value of new transmission and finding that “many interregional transmission links have significant potential economic value from reducing congestion and expanding opportunities for trade” but current planning models may undervalue new interregional links).

40. U.S. DEP’T OF ENERGY, *Next Generation Grid Technologies*, at 15–17 (Nov. 2021), <https://perma.cc/Y4MT-KDWE> [hereinafter DOE Next Generation Grid Technologies] (“At any scale, topology optimization has significant potential to increase the system’s capacity and utilization.”).

41. U.S. DEP’T OF ENERGY, *Advanced Transmission Technologies*, at i–ii (Dec. 2020), <https://perma.cc/JN9U-26P5> [hereinafter Advanced Transmission Technologies] (“Advanced transmission technologies, coupled with advanced computational and advanced dynamic situational awareness, are a suite of tools that can help address transmission challenges, improving the efficiency and effectiveness of electricity delivery and increasing the reliability and resilience of the system. . . . Enhanced planning and optimization methods can help minimize operating costs, while new hardware capabilities can help move more power by upgrading existing line materials using existing transmission pathways.”); Aleksandar M. Stankovic et al., *Methods for Analysis and Quantification of Power System Resilience*, IEEE TRANSACTIONS ON POWER SYSTEMS (2022) (“Traditionally implemented measures, driven by decades of experience, are security and reliability-oriented, and need to be revised to provide adequate resilience. . . . Resilient systems must, therefore, be equipped with appropriate intelligence for leveraging the signals coming from widespread sensors and making sense of them in the identification of these pattern changes.”); Sajadi et al, *supra* note 34 (hoping that their research motivates “a new perspective on emerging power networks and advance the grid planning and optimization frameworks that take advantage of the unique functionalities, complexities, and responsiveness of power electronic devices”); Lau & Hobbs, *supra* note 25, at 44 (Apr. 2021) (“Uncertainty-aware transmission planning can prepare power systems to manage the above risks in several ways. Diversifying resources, by strengthening connections to regions with different resource bases, provides flexibility to respond to both short-and long-term fluctuations in resource costs and availability. Increased transmission investment can enhance this adaptability.”); *id.* at 46–47 (“planning models need to recognize how more sophisticated operations will affect the value from transmission and other investments that increase system flexibility and options available to the operator”); von Meier & Dunn, *supra* note 34 (“Detailed and comprehensive information about operating states before, during, and after an extreme event is necessary to help decision makers to define new heuristics—or even altogether new operating strategies—that will make the system more robust to evolving climate conditions.”).

power markets,⁴² maximizing the utilization of transmission capacity,⁴³ and reducing energy losses and prices.⁴⁴ These innovations will transform transmission networks from passive and inflexible to dynamically adaptable and responsive to system needs.⁴⁵ In short, new operational and planning methods have the potential to reduce costs and improve reliability.

But progress depends on the willingness of system operators to innovate.⁴⁶ RTOs ought to be well positioned to harness new technologies and embrace efficiency-enhancing practices. Unlike the IOUs that operate most of the non-RTO power systems,⁴⁷ RTOs do not have any financial stake in particular assets, business models, or technologies. Their non-profit status should allow them to pursue innovation, even when doing so undercuts entrenched industry players.

But transmission-owning IOUs can stand in the way. IOUs, which own the networks that RTOs operate,⁴⁸ can circumvent and subvert RTO decisionmaking processes. IOUs are the only market participants who can bypass regional

42. U.S. DEP'T OF ENERGY, *Grid-Enhancing Technologies: A Case Study on Ratepayer Impact*, at 62 (Feb. 2022), <https://perma.cc/6GRD-52JQ> (“The results of this study suggest that GETs could prove cost-beneficial in avoiding renewable generation curtailment in the short term and remain useful to facilitate the interconnection of future generation resources while also providing situational awareness and flexibility resources in the longer term.”); T. Bruce Tsuchida et al., Brattle Group, *Unlocking the Queue with Grid-Enhancing Technologies*, 8 (Feb. 1, 2021), <https://perma.cc/E46P-QBTR> (modeling implementation of advanced power flow control, dynamic line ratings, and topology optimization across the southern part of the SPP footprint and finding that these technologies “enable more than twice the amount of additional new renewables to be integrated”).

43. *Grid-Enhancing Technologies*, *supra* note 42, at ii (“Grid-enhancing technologies (GETs) maximize the transmission of electricity across the existing system through a family of technologies that include sensors, power flow control devices, and analytical tools.”); O’Reilly et al., *supra* note 34, at 7 (“Wide use of power-flow control not only expand grid capacity without adding new lines but would also make the grid more flexible and resilient to accommodate a variety of future scenarios.”).

44. *Advanced Transmission Technologies*, *supra* note 41, at 12 (summarizing a topology optimization pilot project that allowed nearly 300 MW of additional wind energy to flow into the network); *Grid-Enhancing Technologies*, *supra* note 42, at 52 (summarizing simulations of New York’s transmission network with generation capacity additions and advanced transmission technologies that reduced curtailment by 43% compared to the base case, saving ratepayers \$1.7 billion per year).

45. Currently, system operators treat the transmission network itself as a passive element. Bose & Overbye, *supra* note 37, at 9 (“In general, transmission grid power flows are controlled indirectly, primarily by changing the generation source, to maintain an interconnection’s steady-state operation . . .”); Sajadi et al., *supra* note 34 (stating that technology can “mak[e] the grid a dynamically adaptive network.”); *Next Generation Grid Technologies*, *supra* note 40, at 5 (introducing report about “evolution of line ratings, from static to dynamic and fast responding . . . about inflexible, firm grid topologies to ones that are variable and agile . . . and the transition from passive hardware to dynamic power electronics that can facilitate and manage the evolving grid more effectively”);

46. I adopt Paul Joskow’s explanation of a system operator. A system operator “has responsibility for balancing supply and demand continuously consistent with reliability criteria, managing wholesale markets where they exist, coordinating with proximate system operators which are often, but not always, part of the same larger synchronized AC network, managing transmission planning processes to meet reliability, economic and potentially decarbonization goals and other public policy goals, and managing transmission investment and cost allocation policies.” Paul L. Joskow, *Facilitating Transmission Expansion to Support Efficient Decarbonization of the Electricity Sector*, 10(2) ECON. OF ENERGY & ENV’T POL’Y 57, 64 (2021).

47. U.S. ENERGY INFO. ADMIN., Form EIA-930, , <https://www.eia.gov/electricity/gridmonitor/about> (listing balancing authorities that are responsible for ensuring supply and demand balance and supporting frequency stability); *see also* North American Electric Reliability Corp. (NERC), Glossary of Terms, <https://perma.cc/TN6V-B4YK> (defining balancing authority).

48. Municipal and cooperative utilities and the federal government also own transmission that is operated by RTOs. Across the RTOs, IOUs own the majority of transmission.

governance and unilaterally change certain regional market and transmission rules and rates. They use this unique power to insulate themselves from competition and defend their control over transmission rates in order to enrich their shareholders.⁴⁹ IOUs have a peculiar business model that does not reward efficiency or innovation and creates opportunities and incentives to take advantage of captive consumers who have no choice but to pay their local utility's bill.⁵⁰ RTOs could counteract their IOU members by filing a complaint with FERC about inefficient IOU rates or service,⁵¹ but RTOs have never taken such a bold stance against their members and they are powerless to replace the IOUs' preferred rates or overrule the IOUs on various transmission development issues.

A recent FERC rulemaking mitigating utilities' control illustrates that IOUs' formal power and informal influence interferes with RTOs' operations. The rule addresses transmission line ratings, which set the maximum energy transfer capability of each transmission line in software used to dispatch power plants, develop transmission expansion projects, and interconnect new generators.⁵² A transmission line's physical capacity to transfer energy changes with temperature, wind speed, and other factors.⁵³ Line ratings can incorporate or ignore these real-world conditions.⁵⁴

Under then-existing rules, IOUs could choose line ratings that benefit their own generation resources and disadvantage their competitors.⁵⁵ For instance, most IOUs used static or seasonal ratings⁵⁶ that did not accurately reflect energy transfer capabilities. By undervaluing transmission capabilities, these fixed line ratings create "inflexible constraints" in system models that result in higher energy prices

49. *Infra* part V.C.

50. See, e.g., Aneil Kovvali and Joshua C. Macey, *Hidden Value Transfers in Public Utilities*, 171 U. PA. L. REV. (forthcoming 2023); *infra* part IV.B.

51. Any person may file a complaint at FERC about transmission rates. 16 U.S.C. § 824e.

52. Comments of Potomac Economics, FERC Docket No. RM20-16, at 5 (Mar. 22, 2021).

53. FERC Staff, *Managing Transmission Line Ratings*, Docket No. AD19-15, at 4–5 (Aug. 2019) [hereinafter FERC Staff White Paper]; Order No. 881, *supra* note 10, at P 2.

54. Monitoring Analytics, *State of the Market Report for PJM: Volume 2*, at 726–27 (Mar. 9, 2023), <https://perma.cc/D4KN-XDPW> (explaining how transmission line ratings have "significant and frequently underappreciated impacts on competitive wholesale power markets like PJM").

55. Order No. 881, *supra* note 10, at PP 67–68 (2021) (summarizing an RTO market monitors' findings that IOUs have "little or no incentive" to provide accurate ratings and that inaccurate line ratings "can result in restricted flows on certain paths while overloading others and can create a potential for de facto physical withholding of the available transfer capability by transmission owners"); Comment of the Transmission Access Policy Group, Docket No. RM20-16, at 11 (Mar. 22, 2021) (warning that new line ratings technologies could expand opportunities for anti-competitive conduct "by widening the range of potential ratings for a facility, and by giving [transmission owners] greater control and discretion to competitively advantage their own generation and disadvantage the generation of others" and urging FERC to impose transparency rules); *TranSource, LLC v. PJM Interconnection*, 168 FERC ¶ 61,119 at P 157 (2019) (noting that the PJM tariff did not then require PJM to verify IOU-provided transmission facility ratings).

56. FERC Staff White Paper, *supra* note 53, at 11–13; Order No. 881, *supra* note 10, at PP 3, 18; Post-Technical Conference Comments of Joseph Bowring, Independent Market Monitor for PJM, at 3 (Sep. 17, 2019) ("In PJM, transmission owners have substantial discretion in the approach to line ratings."); Monitoring Analytics, *supra* note 54, at 727 (noting that while PJM rules require transmission owners to provide ratings that apply to various ambient and system conditions, "there is no requirement that the ratings differ for these operating conditions").

and stifle new entry.⁵⁷ Static ratings can also divert planning processes away from valuable investments.⁵⁸ Consumers ultimately bear the costs of these inefficiencies, while IOUs benefit by thwarting their potential generation and transmission competitors. FERC's 2021 rule aims to address these perverse incentives by requiring IOUs to update line ratings at least hourly based on specified environmental factors.

The rule sets a technological floor for the industry that requires laggards to adopt accepted practices.⁵⁹ Compliance will require little upfront investment and will improve efficiency, particularly for RTOs that were using static ratings.⁶⁰ Following implementation, RTO software will more accurately reflect real physical conditions. RTOs told FERC in this rulemaking proceeding that updating RTO software with accurate line ratings would provide “obvious economic value,”⁶¹ “improve market efficiency,”⁶² and afford the RTO “better situational awareness . . . in managing reliability.”⁶³ Accurate line ratings are essential for harmonizing market prices with the value of the services procured through RTO markets and fulfilling a central tenet of RTO market design.⁶⁴ And yet RTOs

57. U.S. DEP'T. OF ENERGY, *Report to Congress: Dynamic Line Rating*, at 11 (Jun. 2019), <https://perma.cc/DNP3-HK68>.

58. By undervaluing the capacity of existing lines, static ratings can lead to inefficient upgrades.

59. *Advanced Transmission Technologies*, *supra* note 41, at 6 (“In the 1970s, initial attempts were made to provide daily and hourly ratings.”).

60. In the rulemaking process, at least one utility claimed it would need to update a particular software system if FERC required ambient-adjusted ratings. The utility's claim suggests that it currently uses very old software, implying that it does not value innovation in transmission operations and planning. Statement of Dennis D. Kramer, Ameren Services Co. on behalf of MISO Transmission Owners, FERC Docket No. AD19-15, p. 2 (Sep. 10, 2019) (“[T]ransmission control centers use sophisticated software systems . . . many of these systems would need to have some level of modification to accept AARs in the operating horizon.”).

61. Remarks of Shaun Murphy, PJM Interconnection, FERC Docket No. AD19-15, at 1 (Sep. 17, 2019).

62. Testimony of J.T. Smith, Midcontinent Independent System Operator, FERC Docket No. AD19-15, at 3 (Sep. 17, 2019). *See also* Comments of PJM, Docket No. AD19-15, at 2 (Nov. 5, 2019) (stating that accurate line ratings “promote more efficient and reliable system dispatch and cost-effective market operations.”); Motion to Intervene and Comments of the California Independent System Operator Corporation, FERC Docket No. RM20-16, at 4 (Mar. 22, 2021) (stating that ambient adjusted ratings “should promote more reliable and efficient transmission operations”).

63. Testimony of J.T. Smith, *supra* note 62, at 3; Comments of PJM Interconnection, *supra* note 62, at 6 (stating that dynamic line ratings “provide flexibility to grid operators, while reducing congestion in power markets and improving their efficiency, increasing situational awareness and aiding grid resiliency”).

64. Sun et al., *supra* note 34, at 6.5 (“in an efficient market, market prices and payments should be aligned with the value of services provided by individual assets.”); Order No. 825, *Settlement Interval and Shortage Pricing in Markets Operated by Regional Transmission Organizations and Independent Systems Operators*, 155 FERC ¶ 61,276 at P 1 (2016) (addressing “practices that fail to compensate resources at prices that reflect the value of the service resources provide to the system”); Transmittal Letter of PJM Interconnection, Docket No. EL19-58, at 4–5 (Mar. 29, 2019) (endorsing the principle); *ISO-NE*, 173 FERC ¶ 61,106 at P 7 (“ISO-NE explains that it suffers from a ‘misaligned incentives’ problem, which occurs when market participants’ private incentives to take action to improve their ability to provide energy in real-time do not align with society’s interest in such arrangements.”); Remarks of J.T. Smith, *supra* note 62, at 1 (“Transmission line ratings are a fundamental input to the reliable and efficient management of Bulk Electric System. Ratings are the basis of decisions made across the operating horizon including our real time operations, day-ahead management, and long term planning initiatives.”); Comments of the Southwest Power Pool Market Monitoring Unit, FERC Docket No. RM20-16, at 1–2 (Mar. 22, 2021) (“Inaccurate measurement and/or reporting of maximum line capacity that does not accurately represent actual near-term transfer capability of the transmission system ultimately would cause price distortions in markets run by regional transmission organizations.”). Alignment of market prices and value to the

echoed their IOU-members' opposition or took no positions on whether FERC should impose line rating standards.⁶⁵ The RTOs' positions in this proceeding — and the fact that in 25 years they had never formally asked FERC to remedy inaccurate line ratings — reveal a governance problem: RTOs are deferring to their IOU members to the detriment of efficient operations and planning.

On other issues, both incumbent generation owners and transmission-owning IOUs are allied against reforms that could benefit consumers and IOU competitors.⁶⁶ For instance, “much of the electric power industry continues to rely on legacy [planning] processes to create a stable operational and financial environment” for incumbent firms and technologies.⁶⁷ Because they prioritize stability, these transmission expansion planning processes overlook new projects that might disrupt local markets.⁶⁸ Lack of connectivity between RTOs and between RTOs and non-RTO regions keeps local incumbents in control and results in trading patterns that “significantly deviate from the least-cost ideal.”⁶⁹ Profits accrue to high-cost generators within each insufficiently connected region who would be displaced by lower-cost generation that would benefit from the interregional connection. Incumbent generators and transmission owners therefore do not pursue interregional connections because they might diminish their pricing power or local control. Similarly, legacy asset owners are also likely to oppose reforms that can accelerate the interconnection of competing resources.⁷⁰ As I describe in part V.C, IOUs hold have authority and informal influence that allows them to disrupt efforts to link across regions and connect new generators to the network.

system is central to achieving the RTOs' foundational purpose of maintaining “reliability through markets. See CAISO, *Introduction to the ISO Markets*, in 1998 ANNUAL REPORT ON MARKET ISSUES AND PERFORMANCE, <https://perma.cc/YCF5-WUGL> (“The motto of California’s restructured energy industry in general, and the California ISO in particular, is ‘Reliability through Markets.’”); Response of ISO New England to Competitive Market Group’s Paper, Docket No. ER00-971, at 1 (Feb. 3, 2000) (“ISO-NE is fully committed to providing a reliable bulk power supply through effective and efficient markets . . .”); Presentation of Ronald R. McNamara, Vice President of Market Management, MISO, Docket No. AD06-2, at 3–4 (Jan. 25, 2006) (explaining the RTO’s “reliability through markets” approach to short-term operations).

65. I reviewed RTO and IOU filings in FERC dockets AD19-15 and RM20-16.

66. Bose & Overbye, *supra* note 37, at 31 (“The goal of planning is to ensure that the transmission system is robust enough to, at a minimum, reliably transport electricity during normal and statistically likely contingent situations.”); Sun et al., *supra* note 34, at 1.3 (“Transmission planning is a key component of enabling system reliability and flexibility and also plays a crucial role in integrating emerging technologies.”).

67. Lau & Hobbs, *supra* note 25, at 17.

68. Sun et al., *supra* note 34, at 7.7 (“This need identification is problematic in the sense that it can miss possibly high-value long-distance interregional transmission lines, simply because there is no immediately identifiable congestion associated with a particular existing facility. The flaw of the need identification process is one possible cause for the limited number of long-distance interregional transmission lines recommended by the ISO/RTOs.”).

69. Lau & Hobbs, *supra* note 25, at 28. See also Energy Sys. Integration Grp., *Design Study Requirements for a U.S. Macrogrid: A Path to Achieving the Nation’s Energy System Transformation Goals* (2022), <https://perma.cc/SA6E-EJMP> (explaining the benefits of a national transmission network and outlining various technical studies to explore potential designs).

70. See sources cited in note 42 (discussing how advanced transmission technologies can defer the need for network upgrades, which delay and raise the cost of generator interconnection); *Advanced Transmission Technologies*, *supra* note 41, at 19 (observing that advanced transmission technologies can “improve the efficiency of grid planning . . . and reduce transmission expansion costs”).

The U.S. power industry is lagging behind. For instance, dynamic line ratings that account for a range of real-time conditions involve “relatively mature technolog[ies]” and are being implemented elsewhere.⁷¹ Meanwhile, the IOUs’ trade association lauded one of its members *in 2023* for being “*the first* electric company in the United States to install and integrate a dynamic line rating system” into its software.⁷² On interregional transmission, the European Union set a long-term target to enhance cross-border connections.⁷³ Twenty-three gigawatts of cross-border connections were under construction or in advanced stages of permitting at the end of 2022.⁷⁴ Brazil is on pace to complete a similar amount of high-voltage interregional projects, while China may develop ten times more.⁷⁵ But the U.S. has added almost no new interregional capacity in the past decade.⁷⁶

Dynamic line ratings and interregional transmission are low-hanging fruit. Neither rely on unproven technologies nor require untested methodologies. Both would provide easily capturable efficiencies that would benefit consumers. Without governance reforms, the long-term prospects for innovation appear dim. Innovation in backend operations and planning can enable system operators “to reduce consumption, to better exploit renewable sources, and to increase the reliability and performance of the transmission and distribution networks.”⁷⁷ This vision of the “future grid will generally be characterized by more sensors, more communication, more computation, and more control,”⁷⁸ and will likely require installing new devices on assets owned by incumbents in order to change how they operate. Incumbent control over whether to install these devices or alter their assets’ operations may be fatal to innovation.

Transmission operations and planning are necessarily monopoly functions that therefore require regulatory oversight.⁷⁹ States have no authority over transmission operations and only minimal visibility into regional transmission planning through state regulatory processes. New technologies are exposing

71. See, e.g., Transpower, *Variable Line Rating Information*, <https://perma.cc/WPH8-Z8VM> (showing that New Zealand’s system operator uses variable line ratings for 15 “key circuits”); Elia, *Dynamic Line Rating*, <https://perma.cc/HV6J-4AJV> (showing that Belgium’s system operator uses dynamic line ratings for more than two dozen lines); Jonathan Spencer Jones, *Energinet’s dynamic line rating improves overhead capacity by up to 30%*, SMART ENERGY INT’L. (Jun. 1, 2023), <https://perma.cc/CT4G-HSAR> (reporting that the Danish system operator implemented dynamic line ratings on around 20 lines and plan to implement them on 70 lines).

72. Edison Electric Institute, Press Release, *PPL Electric Utilities Wins 95th Edison Award* (Jun. 12, 2023), <https://perma.cc/JWB9-F2P8> (emphasis added). The IOU’s system tracks just three lines. *Dynamic Line Rating Activated by PPL Electric Utilities*, PJM INSIDE LINES (Oct. 24, 2022), <https://perma.cc/8M8L-K2VX>.

73. European Commission, *Electricity Interconnection Targets*, <https://perma.cc/JUF9-XR2X> (stating that the EU had set a target that by 2030 each country should have sufficient capacity to transfer 15% of the electricity produced within its borders to neighboring countries).

74. Peter Markussen, Energinet Transmission System Operator, *Inter-Regional Transmission Targets in Europe*, (Nov. 28, 2022), <https://perma.cc/DHY7-BZVK>; Joskow, *supra* note 46, at 74–5 (describing the ENTSO-E processes).

75. James McCalley & Qian Zhang, Americans for a Clean Energy Grid, *MacroGrids in the Mainstream: An International Survey of Plans and Progress*, 5 (Nov. 2020), <https://perma.cc/3HUC-HEL6>.

76. *Id.*

77. Dagle & Schoenwald, *supra* note 34, at 19.

78. *Id.*

79. See, e.g. *United Distrib. Cos. v. FERC*, 88 F.3d 1105, 1127 (D.C. Cir. 1996) (summarizing that courts have “consistently required the Commission to protect consumers against [transmission owners’] monopoly power”); *Nat’l Ass’n of Regul. Util. Comm’rs. v. FERC*, 475 F.3d 1277, 1280 (D.C. Cir. 2007) (stating that FERC’s “authority generally rests on the public interest in constraining exercises of market power”).

inefficiencies with existing practices and revealing opportunities to reduce costs and improve reliability. Independent regional governance can be an engine for innovation, but FERC must weaken incumbents' formal authority and counteract their informal influence over decisionmaking.

So-called "filing rights" are a key obstacle to mitigating IOU control. In the next section, I connect the process used to develop market and transmission rules to IOU control.

III. FILING RIGHTS AND THE RISE AND FALL OF FERC'S REGIONAL GOVERNANCE OVERSIGHT

Governance is a broad term that encompasses "every device, institution, or mechanism that exercises power over decision-making" within an organization.⁸⁰ The vast literature about corporate governance is focused on the rights and responsibilities of shareholders, the board, and management of publicly traded companies.⁸¹ In this for-profit context, corporate governance aims to bridge the gap between investor ownership of the enterprise from its control by the firm's management.⁸² Without adequate restraints, company managers may be able to enhance their wealth or power at the expense of shareholders. Governance rules and processes aim to mitigate that potential conflict by "aligning the interests of management [control] with the interests of shareholders [ownership] and to incentivize management to act in the corporation's best interest."⁸³

RTOs do not have shareholders, and thus RTO governance does not need to address the traditional mismatches between shareholders and managers at for-profit corporations. Instead, RTO governance aims at preventing "control, and appearance of control, of decision-making by any class of participants" or individual companies.⁸⁴ When FERC authorized RTO development, it believed RTOs could be an antidote to the "fundamental mistrust of transmission owners"⁸⁵ in the industry that was impeding market development and adversely affecting

80. JONATHAN R. MACEY, *CORPORATE GOVERNANCE: PROMISES KEPT, PROMISES BROKEN* 2 (2008).

81. J. ROBERT BROWN JR. & LISA L. CASEY, *CORPORATE GOVERNANCE: CASES AND MATERIALS* 4 (2d ed. 2016); ARTHUR R. PINTO & DOUGLAS M. BRANSON, *UNDERSTANDING CORPORATE LAW* 87 (2d ed. 2009) ("Issues of corporate governance in publicly traded corporations generally have revolved around the shareholders' right to a voice in corporate matters and the monitoring of the managers versus the managers' power to operate the business without shareholder interference. A balance must be struck between the need of shareholders to monitor management's power and the need of the managers to take risks and operate the business effectively.").

82. *See generally* ADOLF A. BERLE & GARDINER C. MEANS, *THE MODERN CORPORATION AND PRIVATE OWNERSHIP* 69 (1932); Pinto & Branson, *supra* note 81, at 94 ("Much of corporate law focuses on balancing the costs and benefits of this separation and utilizing the different monitoring devices available to protect shareholders from losses resulting from the separation of ownership from control."); Harwell Wells, *The Birth of Corporate Governance*, 33 SEATTLE UNIV. L. REV. 1247, 1252 ("[C]orporate governance is a response to the agency problems created by the separation of ownership and control, namely the powerless shareholders and the autonomous management.").

83. Brown & Casey, *supra* note 81, at 5.

84. Order No. 888, *Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities, Recovery of Stranded Costs by Public Utilities*, FERC STATS. AND REGS. ¶ 31,036, 61 Fed. Reg. 21,540, 21,596 (May 10, 1996) [hereinafter Order No. 888].

85. Notice of Proposed Rulemaking, *Regional Transmission Organizations*, 64 Fed. Reg. 31,390, at 31,402 (1999) [hereinafter Order No. 2000 NOPR].

reliability.⁸⁶ For decades, IOUs had engaged in “systemic anti-competitive behavior” designed to reinforce their dominance over the nation’s power sector.⁸⁷ Encouraging utilities to place their regional transmission assets under RTO control was part of FERC’s broader efforts to eliminate “unduly discriminatory” transmission service the Federal Power Act (FPA). FERC’s hope was that remedying undue discrimination would unleash competition in wholesale power markets and ensure just and reasonable rates.⁸⁸ FERC was concerned, however, that its pro-market agenda would “not be successful unless all market participants believe that the RTO will operate the grid and provide transmission service to all grid users on a non-discriminatory basis.”⁸⁹ FERC believed that for RTOs to become “beneficial platform[s] for both competition and reliability,”⁹⁰ RTOs needed to “be independent in both reality and perception”⁹¹ from transmission owners and other market participants.

Beyond this independence requirement, FERC did not instill RTOs with foundational principles to guide their decisionmaking. Instead, FERC assigned RTOs eight transmission-related functions and required that they employ “market mechanisms” to provide reliable service.⁹² To accomplish these tasks, RTOs act within the rules enshrined in FERC-jurisdictional documents, such as their

86. Order No. 2000, *supra* note 15, at pgs. 27–29.

87. Transmission Access Pol’y Study Grp. v. FERC, 225 F.3d 667, 683–85 (D.C. Cir. 2000) (summarizing FERC’s findings that justified its Open Access transmission rules); *see also* Otter Tail Power v. U.S., 410 U.S. 366, 377 (1973) (noting that the Minnesota IOU at issue had “strategic dominance in the transmission of power in most of its service area, and that it used this dominance to foreclose [its competitors] from obtaining electric power from outside sources of supply”); *New England Power Pool Agreement*, 48 FPC 1477, 1478 (1972) (summarizing protest of municipal utilities that the proposed agreement between New England IOUs would allow “all the large utilities, legal competitors of each other, to combine all of the generation and all of the transmission in [the region] . . . without protecting the rights and opportunities of the small municipal and cooperative systems”); *Consumers Power Co.*, 6 NRC 892, 997–1044 (1977) (finding that a Michigan IOU had “strategic dominance over high voltage transmission,” which allows it to “control the terms by which the small utilities can obtain . . . services”); *Alabama Power Company*, 13 NRC 1027, 1070 (1981) (finding that an Alabama IOU had “dominance, particularly over the transmission facilities in south and central Alabama, [which] placed [it] in a unique position to control access to the market”).

88. Notice of Proposed Rulemaking, *Remedying Undue Discrimination through Open Access Transmission Service and Standard Electricity Market Design*, 100 FERC ¶ 61,138, at PP 2–3 (2002) [Hereinafter Standard Market Design NOPR] (summarizing that “Order No. 888 [issued in 1996] and Order No. 2000 [issued in 1999] set the foundation upon which to build regional transmission institutions and competitive electricity markets,” and that in “this third rulemaking initiative” proposed in 2002 but never finalized, FERC aimed “to remedy remaining undue discrimination and establish a standardized transmission service and wholesale electric market design that will provide a level playing field for all entities that seek to participate in wholesale electric markets”); *id.* at PP 20–30 (summarizing Orders No. 888 and 2000 in greater detail and framing them as steps aimed at “eliminating [] undue discrimination in interstate transmission services”); *id.* at P 30 (“Order Nos. 888 and 2000 attempt to effect open access transmission by reducing the ability of transmission owners that also own generators to act in anticompetitive or unduly discriminatory ways against other generators.”).

89. Order No. 2000, *supra* note 15, at pg. 85.

90. Order No. 2000 NOPR, *supra* note 85, at p. 31,399.

91. Order No. 2000, *supra* note 15, at pg. 84.

92. *Id.* at pgs. 131, 154–55

transmission tariffs,⁹³ as well as self-approved business practice manuals.⁹⁴ Because RTOs provide transmission service and facilitate energy trades that fall under FERC's jurisdiction,⁹⁵ all RTO market and transmission rules must receive FERC's approval. FERC evaluates proposed rules under the FPA's "just and reasonable" and not "unduly discriminatory" standards.⁹⁶

FERC filing rights are at the heart of regional grid governance and central to an RTO's independence from utilities and other market participants. Non-discriminatory rules are essential for maintaining neutrality between technologies and market participants in order to provide open platforms for competition. In practice, however, even facially neutral RTO rules can benefit particular technologies or classes of market participants.⁹⁷ Naturally, buyers and sellers prefer rules that benefit their financial and strategic interests and seek to change RTO rules in their favor.

In its initial RTO orders, FERC envisioned that RTOs would have exclusive rights to propose changes to all regional rules, while utilities and other market participants would be relegated to stakeholders or lobbyists who could attempt to shape those filings in internal RTO rule-development processes. FERC explained that "for the RTO to provide transmission service independent from market participants, it must have independent control over its tariff, and not have a tariff that is subject to the control of particular participants in the RTO. . . . If the RTO does not have the independent right to seek appropriate changes to its tariff, it is difficult to see how that RTO could be viewed as providing a transmission service that is independent from market participants."⁹⁸

Tariff filing authority is consequential. With each FERC filing, the tariff filer implicitly favors particular market participants and prioritizes their financial interests.⁹⁹ To approve a proposed tariff amendment, FERC must find only that the proposal is "just and reasonable" under the FPA and need not conclude that the proposal is the best among possible options.¹⁰⁰ Market participants routinely

93. Unless otherwise noted, I use the term "transmission tariff" to refer to RTO agreements and other documents with generally applicable market and transmission rules regulated by FERC. RTOs generally have a few relevant documents. For instance, key PJM documents include the tariff, Operating Agreement, Reliability Assurance Agreement, and Consolidated Transmission Owners Agreement.

94. Rules in FERC-jurisdictional tariffs and other documents are further developed in business practice manuals that are not reviewed by FERC.

95. 16 U.S.C. § 824(b)-(e).

96. 16 U.S.C. §§ 824d, 824e.

97. See Kate Konschnik & Ari Peskoe, *Climate Implications of FERC Proceedings*, HARVARD ENVIRONMENTAL & ENERGY LAW PROGRAM, (Nov. 2017), <https://perma.cc/2T92-3YXK> (explaining that RTO rules "can implicitly benefit particular technologies by favoring certain resource attributes and thereby and push the development of the grid in particular directions" and may "directly benefit particular resource types").

98. Order No. 2000-A, *Regional Transmission Organizations*, 65 Fed. Reg. 12,088, 12,097 (2000) [hereinafter Order No. 2000-A].

99. Travis Kavulla, *Problems in Electricity Market Governance: An Assessment*, R STREET INSTITUTE, 13 (2019), <https://perma.cc/S9SJ-MNEC> (When it files an economically significant proposal, the RTO "is using its central position in the region's power infrastructure to propose a redistribution of wealth from certain captive parties to other captive parties.").

100. See, e.g., *Cities of Bethany, et al. v. FERC*, 727 F.2d 1131, 1136 (D.C. Cir. 1984) (summarizing that the standard in rate decisions is "not whether [one] method is more appropriate than [another] method, but rather whether the [proposed] method is reasonable and adequate"); *Cal. Indep. Sys. Operator*, 128 FERC ¶ 61,282 at

disagree about market reforms, and it is often plausible that FERC could find any of their proposals to be just and reasonable. But only the entity or entities with “filing rights” can impose their preferences on the industry (with FERC approval). The tariff filer can also choose not to pursue any changes at all and instead maintain the status quo.

Once a tariff amendment proposal is filed at FERC, the filer enjoys advantages over entities that protest the proposal. The filer sets the scope of the proceeding,¹⁰¹ frames the issues for FERC’s review, and establishes the timing of the proceeding. Opponents typically have no more than thirty days to file written protests. While a protester may offer FERC alternative proposals, FERC has no authority to approve any competing proposal, and may only accept or reject the filed proposal.¹⁰² FERC-approved market and transmission rules enjoy “legal entitlement against intervention by the judiciary and state regulators.”¹⁰³ FERC approval shields market participants and the RTO itself from state law contract, tort, or fraud claims and allows federal courts to dismiss antitrust and other federal lawsuits.¹⁰⁴ These legal protections are the direct result of the tariff filer’s choice to initiate rule changes.

The connections between RTO governance, tariff filing rights, and FERC’s authority to remedy unduly discriminatory transmission service suggests that FERC ought to have sweeping jurisdiction over RTO governance. However, two D.C. Circuit decisions limit FERC’s authority to oversee regional transmission governance. In 2002, the court effectively overturned FERC’s requirement that RTOs have exclusive rights to file proposed transmission tariff changes. The D.C. Circuit panel held that transmission-owning utilities have “filing rights” under section 205 of the Federal Power Act that FERC cannot abolish, thus handing back to utilities a measure of control over regional transmission that FERC sought to eradicate. Two years later, the D.C. Circuit vacated a FERC order that directed the California ISO (CAISO) to replace its board through a process dictated by FERC.¹⁰⁵ The panel found that FERC’s order amounted to an “unprecedented

P 31 (2009) (“[T]he issue before the Commission is whether the CAISO’s proposal is just and reasonable and not whether the proposal is more or less reasonable than other alternatives. Therefore, because we find the CAISO’s proposal to be just and reasonable, we need not assess the justness and reasonableness of [an] alternative proposal.” (citations omitted)).

101. See, e.g., *ISO-NE*, 156 FERC ¶ 61,096 at P 19 (2016) (rejecting a market participants’ proposal as “beyond the scope of ISO-NE’s instant proposal”); *PJM Interconnection*, 182 FERC ¶ 61,191 at P 21 (2023) (rejecting protests because they are “beyond the scope of this FPA section 205 filing”).

102. *Advanced Energy Mgmt. All. v. FERC*, 860 F.3d 656, 662 (D.C. Cir. 2017) (“When acting on a public utility’s rate filing under section 205, the Commission undertakes ‘an essentially passive and reactive role’ and restricts itself to evaluating the confined proposal.” (citing *City of Winnfield v. FERC*, 744 F.2d 871, 875–76 (D.C. Cir. 1984)); *NRG Power Mktg. v. FERC*, 862 F.3d 108 (D.C. Cir. 2017) (holding that FERC violated section 205 when its “modifications” to PJM’s filed proposal “resulted in ‘an entirely different rate design’ than both PJM’s proposal and PJM’s prior rate scheme” (quoting *Western Resources, Inc. v. FERC*, 9 F.3d 1568, 1578 (D.C. Cir. 1993))).

103. Jim Rossi, *Lowering the Filed Tariff Shield: Judicial Enforcement for a Deregulatory Era*, 56 VAND. L. REV. 1591, 1604 (2003).

104. *Id.* See, e.g., *Yorty v. PJM Interconnection*, 79 A.3d 655 (Pa.Super.2013) (holding that “PJM’s Tariff is the equivalent of a federal regulation” and preempting a lawsuit filed in state court a transmission-line worker’s severe injuries because “the limitation on liability contained in PJM’s Tariff carries the full force of federal law that preempts Pennsylvania law permitting liability for negligence”).

105. *Cal. Indep. Sys. Operator v. FERC*, 372 F.3d 395 (D.C. Cir. 2004) (vacating *Mirant Delta, et al. v. CAISO*, 100 FERC ¶ 61,059 (2002)).

invasion of internal corporate governance”¹⁰⁶ that could not be sustained by FERC’s limited jurisdiction over utility practices that “directly affect the rate.”¹⁰⁷

These two decisions, along with political blowback associated with the Western Energy Crisis of 2000–2001 and FERC’s abandoned proposal to mandate independent transmission control, effectively ended FERC’s oversight of grid governance.¹⁰⁸ Following a flurry of activity from 1996 to 2002, FERC has done virtually nothing to reform RTO governance or to reign in IOU control in the non-RTO regions. This about-face does not have to be the end of the story. In the next part, I show that FERC regulation of regional governance dates back fifty years. I also explain that the two D.C. Circuit decisions on governance provide FERC with options for reviving its governance agenda.

IV. INDEPENDENT REGIONAL GOVERNANCE IS AN EFFECTIVE REMEDY FOR INEFFICIENT AND ANTI-COMPETITIVE TRANSMISSION OPERATIONS AND PLANNING

In this part, I trace the history of FERC’s regulation of regional governance to show that discriminatory decisionmaking has been a long-standing concern. I discuss how FERC’s formal recognition that IOUs were harming consumers with systemic anti-competitive transmission service led FERC to encourage independent governance. But FERC quickly abandoned efforts to require independent governance, and its sole major governance initiative in the past two decades was to force non-RTO member IOUs to formalize regional transmission planning coalitions. The failure of FERC’s policy — non-RTO IOUs have never planned any regional projects — highlights the value of independent governance. In this section I also explain how the two D.C. Circuit decisions that ostensibly harmed FERC’s governance agenda provide a roadmap for reforms.

A. *FERC’s Legal Framework Demands Regulation of Utility Alliances*

FERC has exclusive jurisdiction over the rates, terms and conditions of contracts for the exchange of electricity in interstate commerce.¹⁰⁹ IOUs that enter into new contracts must file them for FERC’s approval, and FERC may order changes to existing agreements if it finds that they are no longer just and reasonable or are unduly discriminatory.¹¹⁰ Since Congress empowered FERC with this authority in 1935, IOUs have filed “thousands of arrangements” that provided “for various degrees and methods of electrical coordination.”¹¹¹ Prior to its Open Access transmission rules, which I describe in the next section, FERC routinely approved these agreements, even though they reinforced IOU dominance over the nation’s power sector.¹¹²

In 1977, FERC took a small but legally significant step toward regulating regional governance. Eleven IOUs had proposed a “power pool” that would enable regional sharing of back-up generation and coordinated long-term

106. *Id.* at 399.

107. *Id.* at 403.

108. *See infra* part IV.C.

109. 16 U.S.C. § 824(c), (d).

110. 16 U.S.C. §§ 824d, 824e.

111. FEDERAL POWER COMMISSION, 1970 NATIONAL POWER SURVEY, at I-17-1 (1972).

112. Utility Transmission Syndicate, *supra* note 12, at 7–8, 13–19.

planning. FERC found that the agreement would exclude smaller utilities from the IOU-run pool and ordered the IOUs to file non-discriminatory membership criteria. FERC explained that the “oftentimes subtle and yet significant long-term impact of power pooling demands our close scrutiny of provisions which deny access to the benefits of the pool.”¹¹³ It concluded that the proposed membership criteria were not “sufficiently quantitative to assure objective and nondiscriminatory interpretation.”¹¹⁴ FERC’s order recognized — for the first time — the connection between jurisdictional rates and nondiscriminatory participation in a regional utility alliance.¹¹⁵

Fifteen years later, FERC found that the governance of a utility alliance could also affect jurisdictional rates. Shortly after Congress amended power industry financial regulations to facilitate generation investment,¹¹⁶ FERC issued guidelines aimed at encouraging utilities to form regional alliances that would promote competition in wholesale sales. FERC expected that these Regional Transmission Groups (RTGs) would facilitate efficient transmission service and coordinate regional planning that would benefit wholesale market development.¹¹⁷

FERC determined that, to receive its approval, an RTG agreement “should include fair and non-discriminatory governance and decisionmaking procedures, including voting procedures.”¹¹⁸ FERC explained that an “RTG should have rules or procedures to protect the rights of entities that are more susceptible to the exercise of market power,” such as market participants that depend on IOU-owned transmission to deliver power, and that, in general, “if the voting rules permit transmission owners to dominate the RTG . . . this would disadvantage weaker users and would be unfair.”¹¹⁹

FERC’s RTG guidelines had a limited effect, in part because FERC’s RTG promotion was overtaken by its Open Access agenda described below. Nonetheless, the RTG policy statement is significant for finding governance jurisdictional. FERC approved only three RTGs,¹²⁰ and discussed governance in just one of the approval orders.¹²¹ This order marked FERC’s most significant governance reform prior to the development of RTOs.

113. *Mid-Continent Area Power Pool Agreement*, 58 FPC 2622, at p. 2631–36 (1977), *aff’d*, *Central Iowa Power Co-operative v. FERC*, 606 F.2d 1156 (D.C. Cir. 1979).

114. *Id.* at 2636.

115. *Id.* at 2635–36.

116. Jeffrey D. Watkiss & Douglas W. Smith, *The Energy Policy Act of 1992: A Watershed for Competition in the Wholesale Power Market*, 10 YALE J. ON REG. 447, 449 (1993).

117. FERC, *Policy Statement Regarding Regional Transmission Groups*, 58 Fed. Reg. 41,626, 41,627–28 (Aug. 5, 1993).

118. *Id.* at 41,631.

119. *Id.* FERC declined to specify acceptable governance arrangements, believing instead that RTGs must have “flexibility” while reiterating that “procedures must be fair and non-discriminatory.” *Id.*

120. *PacifiCorp, et al.*, 69 FERC ¶ 61,099 (1994) (approving the Western Regional Transmission Association); *Southwest Regional Transmission Association*, 69 FERC ¶ 61,100 (1994); *Northwest Regional Transmission Association*, 71 FERC ¶ 61,397 (1995).

121. *Southwest Regional Transmission Association*, 69 FERC ¶ 61,100, at p. 61,399 (1994) (approving a nine-person board, with three classes of RTG members each appointing three board members and ordering the RTG to explicitly empower the board to review all planning committee decisions because members in the non-transmission owning class protested that the committee was designed to prioritize transmission owners’ individual transmission plans, and that the transmission owners could discriminate against other classes by dominating the planning committee).

B. Open Access Transmission Diminishes IOU Control and Promotes Independent Governance

The RTG guidelines provided a model for how FERC would promote independent governance. By establishing minimum standards for RTG agreements, FERC intended to accelerate industry discussions about new regional alliances.¹²² The guidelines provided a framework for negotiations between IOUs and other market participants about acceptable coordination mechanisms and established a baseline for FERC's evaluation of IOU-filed coordination proposals.¹²³ Although FERC did not prohibit IOUs from coordinating through other types of agreements, the guidelines reflected FERC's preference for RTGs over other arrangements. Shortly after issuing its RTG guidelines, FERC adopted a similar approach for encouraging IOUs to form RTOs.

A brief note about terminology. FERC initially used the term independent system operator, or ISO. In nearly every respect, an RTO is identical to an ISO,¹²⁴ and I will use the acronym RTO for the remainder of this paper. I document in footnotes when I modify a source that uses the term ISO.

RTOs build upon FERC's Open Access transmission rules that set national standards for transmission service. Order No. 888, which created Open Access standards in 1996, marked FERC's first industry-wide transmission rule. FERC had previously regulated utilities on a tariff-by-tariff basis, limiting its findings of unjust and unreasonable rates or unduly discriminatory service to a single utility's terms of service.¹²⁵ But in Order No. 888, FERC relied on "general findings of systemic monopoly conditions" and the "potential for anti-competitive behavior" across the industry to justify a new approach.¹²⁶

Absent regulatory intervention, FERC predicted that IOUs would unduly discriminate because "the inherent characteristics of monopolists make it inevitable that they will act in their own self-interest to the detriment of others by refusing transmission and/or providing inferior transmission to competitors in the

122. *Policy Statement Regarding Regional Transmission Groups*, *supra* note 117, at 41,628.

123. *Id.* at 41,629.

124. One key difference: RTOs must be regional in scope. Because they only control transmission assets within a single state, FERC never certified the California ISO (CAISO) and New York ISO (NYISO) as RTOs and they technically are ISOs.

125. *See, e.g., St. Michaels Utils. Comm'n v. FPC*, 377 F.2d 912, 915 (D.C. Cir. 1967) (In a case reviewing claims of undue discrimination, "judicial inquiry devolves on the question of whether the record exhibits factual differences to justify classifications among customers and differences among the rates charged them"); *Cities of Newark, et al. v. FERC*, 763 F.2d 533, 546 (3d Cir. 1985) (explaining that in determining whether rates are unduly discriminatory, FERC considers whether "differences in rates are justified where they are predicated upon factual differences between customers and that these differences may arise from differing costs of service or otherwise"); *Ala. Elec. Co-op. v. FERC*, 684 F.2d 20, 29 (D.C. Cir. 1982) (explaining that FERC finds undue discrimination when a utility fails to justify a rate disparity among customers or customer classes); *Am. Elec. Power Serv. Corp.*, 67 FERC ¶ 61,168, at p. 61,490 ("traditionally the focus of our undue discrimination analysis has been whether factual differences justify different rates, terms and conditions for similarly-situated customers").

126. *Transmission Access Pol'y Study Grp. v. FERC*, 225 F.3d 667, 688 (D.C. Cir. 2000); Order No. 888 NOPR, *supra* note 13, at 17,665 (concluding that IOUs "possess substantial market power; that, as profit maximizing firms, they have and will continue to exercise that market power in order to maintain and increase market share . . . and that these unduly discriminatory practices will deny consumers the substantial benefits of lower electricity prices"); *id.* at 17,664 ("[M]arket power through control of transmission is the single greatest impediment to competition"); *id.* at 17,675-77 (cataloging discriminatory IOU transmission practices).

bulk power markets.”¹²⁷ Having found undue discrimination on an industry-wide basis, FERC took remedial action against the entire industry. It ordered all IOUs to file Open Access transmission tariffs that would provide uniform rates, terms, and conditions to all users.¹²⁸ FERC also attempted to open the industry’s “black box of transmission information” and prevent IOUs from buying and selling energy using non-public transmission information.¹²⁹ With these reforms, FERC hoped to eliminate unfair barriers to market participation that were embedded in IOU tariffs in order to unleash competition in wholesale power markets.

To support this vision, FERC concluded that it had to prevent utilities from “trad[ing] with a selective group within a power pool that discriminatorily excludes others from becoming a member and that provides preferential intra-pool transmission rights and rates” to IOUs.¹³⁰ FERC therefore ordered IOUs to remove provisions in power pool and other agreements that granted IOU members superior transmission access.¹³¹ FERC encouraged IOUs to replace power pools with RTOs, new entities that would operate IOU-owned transmission facilities and provide uniform service to IOUs and all other users.¹³²

To foster RTOs that would efficiently operate a regional power system and provide non-discriminatory service, FERC concluded an RTO’s “governance should be structured in a fair and non-discriminatory manner.”¹³³ To achieve that goal, FERC determined that an RTO should be:

independent of any individual market participant or any one class of participants. . . . A governance structure that includes fair representation of all types of users of the system would help ensure that the RTO formulates policies, operates the system, and resolves disputes in a fair and non-discriminatory manner. The ISO’s rules of governance [] should prevent control, and appearance of control, of decision-making by any class of participants.¹³⁴

127. Order No. 888, *supra* note 84, at 21,567; Order No. 888-A, *Promoting Wholesale Competition through Open Access Non-Discriminatory Transmission Services by Public Utilities*, 62 Fed. Reg. 12,274–75 (“Utility practices that were acceptable in past years, if permitted to continue, will smother the fledgling competition in electricity markets . . .”) [hereinafter Order No. 888-A].

128. Order No. 2000, *supra* note 15, at pg. 210 (stating that in Order No. 888 its “primary focus, both in terms of access and pricing was comparability; that is, all transmission users should receive access under rates, terms and conditions comparable to those the transmitting utility applies to itself to serve its own customers”); Order No. 888, *supra* note 84, at 21,547–21,549 (discussing FERC’s “Comparability Standard”). FERC also required IOUs to “unbundle” energy sales and transmission service by charging separate rates for each, which would facilitate delivery of non-IOU generated power over IOU transmission. *Id.* at 21,552.

129. Order No. 889, *Open Access Same-Time Information System (Formerly Real-Time Information Networks) and Standards of Conduct*, FERC STATS. AND REGS. ¶ 31,037, 61 Fed. Reg. 21,737, at 21,740 (1996); Order No. 888, *supra* note 84, at 21,552.

130. Order No. 888, *supra* note 84, at 21,593.

131. *Id.*

132. *Id.*

133. *Id.* at 21,596 (ISO in original).

134. *Id.* (ISO in original); *see also* Cal. Indep. Sys. Operator Corp. v. FERC, 372 F.3d 395, 397 (D.C. Cir. 2004) (“An ISO conducts the transmission services and ancillary services for all users of such a system, replacing the conduct of such services by the system owners—that is, the integrated electric utilities whose market power FERC was attempting to control by encouraging the creation and operation of the ISOs. In order to accomplish that purpose, FERC deems it crucial that an ISO be independent of the market participants so that decisions of policy, operation, and dispute resolution be free of the discriminatory impetus inherent in the old system.”).

Because RTOs would operate interstate transmission, FERC would regulate them as “public utilities” under the FPA,¹³⁵ and their transmission tariffs would have to meet with FERC’s newly issued Open-Access standards. Dan Walters and Andrew Kleit explain that “by branding RTOs as utilities that must file their own tariff, and by mandating that RTOs remain truly independent from their constituent users, FERC created a brand-new need for institutional machinery to facilitate governance of the relationship between now-unbundled subsectors of the industry.”¹³⁶ FERC oversight of RTO governance ensures some transparency about regional decisionmaking and provides opportunities for participation. By contrast, in non-RTO regions, decisions about regional industry coordination are made behind closed doors, in IOU C-suites and corporate boardrooms.¹³⁷ Non-IOU firms have no authority, and even industry regulators may be left in the dark. In RTOs, the degree of transparency and participation in decisionmaking varies depending on the governance arrangements proposed by IOUs and ultimately approved by FERC. I discuss the details in part V and focus here on how FERC attempted to prevent IOUs from directly controlling RTOs.

IOUs that had formed tightly coordinated power pools were the first to respond to FERC’s invitation to form RTOs. For instance, PJM IOUs proposed to appoint two of the seven RTO board members and hold supermajorities on PJM-member committees charged with “oversee[ing] every aspect of the RTO’s operation.”¹³⁸ FERC rejected this proposal and other IOU-proposed governance arrangements that would have allowed IOUs to exercise “ultimate control.”¹³⁹

Having lost their bids for direct control over an RTO, PJM utilities went to court seeking another mechanism to maintain control over regional power sector rules. They challenged FERC’s rejection of their proposal to empower themselves to file certain transmission tariff amendments without the approval of the PJM RTO. To protect the RTO’s independence, FERC had determined that the RTO should have exclusive and unilateral authority to file changes to transmission rate

135. 16 U.S.C. § 824(e); *PJM Interconnection*, 101 FERC ¶ 61,318 at PP 22–25 (2002).

136. Daniel Walters and Andrew N. Kleit, *Grid Governance in the Energy Trilemma Era: Remedying the Democracy Deficit*, 74 ALA. L. REV. 1033, 1057 (2022) (ISO in original).

137. The development of the “Southeast Energy Exchange Market (SEEM) by IOUs in the region illustrates how major regional decisions are made without public input. See John Downey, *Exclusive: Duke Energy, Southern Co. and Others in Talks to Establish a Southeast Energy Market*, CHARLOTTE BUS. J. (Jul. 14, 2020) (reporting that Southern Company was a “prime mover” in the effort to forge SEEM, that the utilities had signed non-disclosure agreements about their talks, that state regulators were unaware, and that industry stakeholders were concerned that the IOUs were trying to preempt public discussions about the future industry structure); Letter from Clean Energy Groups, North Carolina Public Utilities Commission Docket No. E-100 Sub 171 (Dec. 21, 2020) (responding to Duke Energy’s recent filing about SEEM and alleging that SEEM “was created by a consortium of utilities and was neither customer-led nor developed with input from state policymakers or other stakeholders”).

138. *Atlantic City Elec. Co., et al.*, 77 FERC ¶ 61,148, at pp. 61,560–61 (1996) (ISO in original).

139. *Id.* at p. 61,574; *New England Power Pool*, 83 FERC ¶ 61,045, at p. 61,260–61 (1998) (rejecting utilities’ RTO proposal that would give “a few large utilities excess influence”); *New England Power Pool*, 86 FERC ¶ 61,262, at p. 61,965 (1999) (same); *Central Hudson Gas & Electric*, 83 FERC ¶ 61,352, at p. 62,409 (1998) (rejecting utilities’ NYISO proposal because it would allow utilities to “continue to exercise substantial voting power”); *Central Hudson Gas & Electric*, 87 FERC ¶ 61,135, at p. 61,540 (1998) (rejecting a settlement about NYISO because the voting structures still “vest[ed] disproportionate authority in the Transmission Providers”); *Mid-Continent Area Power Pool*, 87 FERC ¶ 61,075, at p. 61,317 (1999) (rejecting power pool governance proposal that allocated voting shares based on revenues because it would “give[] too much influence to the vertically integrated utility members that own the transmission system”).

design and terms of service, leaving IOUs with authority only over filings about the total amount of money collected from transmission rates.¹⁴⁰ In *Atlantic City*, the D.C. Circuit sided with the IOUs, holding that transmission-owning utilities have “filing rights” under section 205 that FERC may not revoke. The court noted that IOUs may choose to voluntarily give up rights by contract.¹⁴¹

The D.C. Circuit’s decision in *Atlantic City* forced FERC to reconsider the scope of independent governance. FERC believed that RTO control over tariff amendment filings was necessary to ensure that market and transmission rules would be “developed in accordance with the [FERC-approved] governance process,”¹⁴² which would mitigate the potential for unduly discriminatory service.¹⁴³ The D.C. Circuit’s decision empowered IOUs to bargain with the RTOs they had created about the scope of independence. Emboldened by the D.C. Circuit’s holding, IOUs negotiated to retain filing rights over various regional transmission rules. FERC approved settlements between RTOs and their utility members that allocated filing rights,¹⁴⁴ although it warned utilities that it could revisit those agreements if utilities wield their rights in a way that compromises RTO independence.¹⁴⁵ (Spoiler alert: FERC has not revisited IOU filing rights. In Part VI, I suggest FERC finally do so.)

Meanwhile, prior to the *Atlantic City* decision, FERC issued Order No. 2000, which required all IOUs to consider ceding operational control of their transmission assets to an RTO.¹⁴⁶ The accompanying RTO guidelines repeatedly tie RTO governance to FERC’s anti-discrimination agenda.¹⁴⁷ FERC emphasized that “independence is the bedrock” upon which RTOs must be built,¹⁴⁸ because it concluded that an “RTO will not be successful unless all market participants believe that the RTO will operate the grid and provide transmission service to all grid users on a non-discriminatory basis.”¹⁴⁹ FERC therefore instructed that RTOs must be “independent in both reality and perception,”¹⁵⁰ explaining that “without such independence, it will be difficult for an RTO to act in a non-discriminatory

140. *PJM Interconnection*, 81 FERC ¶ 61,257, at p. 62,279 (1997).

141. *Atlantic City Elec. Co., et al. v. FERC*, 295 F.3d 1, 9–11 (D.C. Cir. 2002).

142. 81 FERC ¶ 61,257, at p. 62,279 (1997).

143. 101 FERC ¶ 61,318 at PP 26–29 (2002); *supra* note 98 and accompanying text.

144. *PJM Interconnection*, 105 FERC ¶ 61,294 at P 11 (2003); *MISO*, 110 FERC ¶ 61,380 at P 19 (2005) (citing *ISO-NE*, 106 FERC ¶ 61,280 at P 72 (2004) and *SPP*, 106 FERC ¶ 61,110 at P 98 (2004)).

145. 105 FERC ¶ 61,294 at P 33.

146. Order No. 2000, *supra* note 15, at pg. 3.

147. *Id.* at pg. 29 (“[W]e affirm our conclusion in the NOPR that economic and engineering inefficiencies and the continuing opportunity for undue discrimination are impeding competitive markets. As noted below, we conclude that RTOs will remedy these impediments. . . .”).

148. *Id.* at pgs. 63, 79.

149. *Id.* at pg. 85.

150. *Id.* at pg. 84; *id.* at pg. 95 (“we emphasize that the common element for all types of RTOs must be that they satisfy the threshold principle that their decisionmaking should be independent of market participants”); *id.* at pg. 84 (noting that the DOE Reliability Task Force and North American Electric Reliability Corporation (NERC) also emphasized the importance of the independence of regional operators from market participants and quoting U.S. DEP’T OF ENERGY, *Maintaining Reliability in a Competitive U.S. Electricity Industry: Final Report of the Task Force on Electric System Reliability*, xv (Sep. 29, 1998), <https://perma.cc/PZ6U-TSJU> and NORTH AMERICAN RELIABILITY COUNCIL, *Electric Reliability Panel, Reliable Power: Renewing the North American Electric Reliability Oversight System*, at 17 (Dec. 22, 1997)).

manner.”¹⁵¹ Ultimately, FERC “believe[d] that the use of RTOs throughout the country, with the required independence from market participants, can reduce opportunities for unduly discriminatory conduct.”¹⁵²

FERC articulated three main criteria for judging independence: 1) RTO employees and directors may not have any financial stake in any market participant; 2) the RTO “must have a decisionmaking process that is independent of control by any market participant or class of participants;”¹⁵³ and 3) the RTO must have exclusive and independent authority to file changes to its transmission tariff.¹⁵⁴ The D.C. Circuit effectively weakened the third criteria in *Atlantic City*, leaving the same independence criteria that FERC created in its 1996 Open Access order. FERC did not impose specific requirements on RTO decisionmaking structures and processes, in part because it concluded that based on its “limited experience” with independent governance it was “premature to conclude that one form of governance is clearly superior to all other forms in every situation.”¹⁵⁵

Across numerous orders reviewing RTO proposals, FERC’s overriding concern about governance was to ensure that formal structures and processes did not provide transmission-owning IOUs or any other class of market participants with direct control over RTO decisions. FERC failed to grapple with the possibility that RTOs might be susceptible to IOU influence. In one RTO formation proceeding, state utility regulators claimed that transmission owners “will always exercise greater influence over the RTO decision-making process than will any other member,” in part because they “could threaten to withdraw . . . in an attempt to influence” RTO decisions. FERC dismissed these concerns, finding that the RTO’s formal structures and funding should insulate it from implicit control or undue influence.¹⁵⁶

Once an RTO is approved and functional, FERC regulates RTOs in two ways. First, most changes to RTO rules are developed by RTO staff, market participants, or the transmission-owning IOUs, using governance processes I describe in part V. FERC reviews any proposed amendments to tariffs and other FERC-jurisdictional documents. FERC says it applies the same standard of review regardless of who files a tariff amendment or what process, if any, the tariff filer followed to develop the proposal.¹⁵⁷ As I explained above, the tariff filer enjoys several advantages in these proceedings over entities that protest the filing.

151. Order No. 2000, *supra* note 15, at pg. 80 (“[A]n RTO must be independent of any entity whose economic or commercial interests could be significantly affected by the RTO’s actions or decisions. Without such independence, it will be difficult for an RTO to act in a non-discriminatory manner.”).

152. Order No. 2000-A, *supra* note 98, at 12,091.

153. *See also* Order No. 2000, *supra* note 15, at pg. 88 (“independence of an RTO ultimately depends on who makes the decisions [and] control of decisionmaking ultimately depends on who votes and how many votes each party has” on the Board).

154. *Id.* at pg. 295 (creating 18 CFR 35.43(j)(1)).

155. *Id.* at pg. 94.

156. *MISO*, 103 FERC ¶ 61,169 at PP 16–20 (2003) (concluding that MISO’s “governance structure satisfied the independence requirements as it is a self-financing organization and not owned by any market participant” and its “Board of Directors was structured to be independent of control by any market participant”).

157. FERC has said that it does not defer to RTO filings just because they are developed through stakeholder processes. *See PJM Interconnection*, 162 FERC ¶ 61,139 at P 136 (2018) (FERC “determines the merits of a proposal independent of the outcomes of the stakeholder process”); *SPP*, 152 FERC ¶ 61,226 at P 116

Second, using its authority under FPA section 206 to remedy unjust and unreasonable rates or unduly discriminatory service, FERC occasionally imposes changes to transmission service or market rules. For instance, FERC requires all RTOs to provide market rules that do not unduly discriminate against storage resources, such as batteries, or aggregations of resources connected to a utility's local delivery system.¹⁵⁸ These orders recognize that RTO "market rules [were] designed for traditional resources [and] can create barriers to entry for emerging technologies."¹⁵⁹ FERC may also order changes to an individual RTO's rules upon a finding that existing rules violate the FPA's ratemaking standards.

FERC orders modifying its Open Access transmission rules apply to all "transmission providers," a term that includes RTOs and IOUs. FERC generally justifies amendments to its Open Access transmission rules by finding that changes in the industry have exposed long-standing practices as unduly discriminatory.¹⁶⁰ It then demands that transmission providers amend their tariffs in order to address the unduly discriminatory provisions.¹⁶¹ FERC orders imposing rule changes trigger a compliance process. Regulated entities must respond to FERC's order with proposed tariff amendments that comply with FERC's directives. FERC then determines whether the filing from each regulated entity meets FERC's standards.

Rarely, FERC has provided different compliance options for RTOs and IOUs. In its first order amending Open-Access rules, FERC concluded that IOUs were obstructing competition in power markets by adding costs and delays to new generators' connection requests.¹⁶² To limit IOUs' opportunities to impede competition by manipulating the interconnection process, FERC required transmission providers to follow standardized procedures for connecting new generators to the transmission network. Because RTOs do not own generation that might be harmed by new generators, FERC understood that an RTO is "less likely to act in an unduly discriminatory manner than a transmission provider that is a

(2015) ("While we accord an appropriate degree of deference to stakeholder processes, our decisions are based on our review of the record to determine whether a proposal is just and reasonable"); *but see New England Power Pool, et al.*, 105 FERC ¶ 61,300 at P 22 ("Generally, the Commission has clearly indicated . . . that it will give deference to regional choices, particularly the choices of the [Regional State Committees], on how to allocate the costs of transmission expansions."); *ISO-NE, et al.*, 132 FERC ¶ 61,122 at P 22 (2010) ("While 'stakeholder consensus is an important factor to be considered in reviewing the just[ness] and reasonableness of a rate design,' it is also the case that 'stakeholder support alone cannot ultimately prove that a rate design is just and reasonable.'") (citing *Am. Elec. Power Serv. Corp. v. MISO*, 122 FERC ¶ 61,083 at P 172 (2008) and *Pub. Serv. Comm'n of Wisconsin v. FERC*, 545 F.3d 1058, 1062–65 (D.C. Cir. 2008)).

158. Order No. 841, *supra* note 10; Order No. 2222, *supra* note 10.

159. Order No. 841, *supra* note 10, at P 10; Order No. 2222, *supra* note 10, at P 16.

160. *See, e.g.*, Order No. 764, *Integration of Variable Energy Resources*, 139 FERC ¶ 61,246 at P 46 (2012) ("As in Order No. 890, the Commission is acting in part to remedy [Open Access Transmission Tariff] provisions that may allow public utility transmission providers to treat some customers in an unduly discriminatory manner. Such an endeavor necessarily requires the Commission to take notice of the general developments in the electric industry in deciding what generic reforms may be needed to ensure that the pro forma OATT does not unduly discriminate against any one class of customers.") (citing *Transmission Access Policy Study Grp. v. FERC*, 225 F.3d 667 (D.C. Cir. 2000); *Wisc. Gas Co. v. FERC*, 770 F.2d 1144 (D.C. Cir. 1985); *Associated Gas Distrib. v. FERC*, 824 F.2d 981 (D.C. Cir. 1987)).

161. *See, e.g.*, Order No. 890, *supra* note 15, at PP 44, 57–63; Order No. 1000, *supra* note 10, at PP 25–29, 42–46; Order No. 764, *supra* note 160, at PP 16–24.

162. Order No. 2003, *Standardization of Generator Interconnection Agreements and Processes*, 104 FERC ¶ 61,103, at PP 10–11 (2003).

market participant.”¹⁶³ It therefore provided RTOs with “greater flexibility to customize its interconnection procedures” and committed to providing leeway when it reviewed RTO compliance filings.¹⁶⁴

In the next section, I explain how FERC used this “independent entity variation” to induce an RTO to change its governance processes so they comply with the independence principle. In Part VI, I argue that FERC could follow this established roadmap to reform RTO governance and encourage IOUs outside of RTOs to cede control to independently governed transmission providers.

C. FERC Retreats from Governance Oversight Following a California Market Meltdown

In the early 2000s, FERC moved swiftly to restructure the nation’s interstate power systems. By July 2002, there were five functioning RTOs,¹⁶⁵ several additional RTOs approved by FERC to commence operations, and other RTO proposals sitting in FERC’s dockets. FERC nonetheless remained concerned that “vertically integrated transmission owners and operators continue to use their interstate transmission facilities in ways that inhibit competition in wholesale power markets.”¹⁶⁶ To address the “ability of such vertically integrated utilities . . . to exercise some degree of transmission market power in order to protect their own generation market share,” FERC proposed to mandate independent transmission governance.¹⁶⁷ Under FERC’s “Standard Market Design” proposal, IOUs could either join an RTO or cede control of their transmission to another entity whose governance met FERC’s independence principle.¹⁶⁸

But FERC never finalized this proposal.¹⁶⁹ Political pushback, as well as the *Atlantic City* and *CAISO* decisions, held back FERC’s efforts.¹⁷⁰ By July 2005, FERC terminated its proposed rulemaking and pulled the plug on its efforts to require and regulate independent grid governance. The two losses at the D.C. Circuit and firestorm on Capitol Hill over its Standard Market Design proposal seemed to have left a mark, but perhaps the root cause of FERC’s retreat was the

163. *Id.* at P 827.

164. *Id.* at P 828.

165. Technically, most of these organizations were ISOs. As noted, this naming convention does not indicate differences between the organizations and has no relevance for governance.

166. Standard Market Design NOPR, *supra* note 88, at P 31.

167. *Id.* at P 125 (“To remedy this undue discrimination, transmission service must be provided by an independent entity.”); *id.* at P 347 (“[W]e propose that Independent Transmission Providers establish a mechanism for regional transmission planning and expansion . . .”).

168. *Id.* at P 125 (mandating independent control); *id.* at PP 556–572 (summarizing governance requirements).

169. Order Terminating Proceeding, FERC Docket No. RM01-12, (July 19, 2005).

170. *See, e.g.*, Chris Baltimore, *FERC Chief’s Aggressive Style Sinks US Grid Plan*, REUTERS NEW SERV. (Jul. 14, 2004) (stating that the proposal “hit a buzz-saw of criticism from Southern and Northwest lawmakers who cast it as a federal power grab”). The U.S. House of Representatives passed an omnibus energy bill that would have prohibited FERC from finalizing the rule. H.R. 6, § 1235, 109th Cong. (2005) (engrossed). FERC rescinded its proposal in July, and this provision was not in the Energy Policy Act of 2005 that was signed into law in August 2005.

crisis of confidence in FERC's new market-based regulatory regime triggered by the Western Energy Crisis.¹⁷¹

As FERC was in the midst of encouraging utilities to form RTOs, prices spiked in the CAISO market in May 2000. Over the course of the next year, wholesale prices were persistently high and California consumers faced several supply shortages. FERC later summarized that the so-called "2000-2001 energy crisis in the West was the result of a confluence of factors," including "flawed market rules . . . and market manipulation."¹⁷² FERC expended considerable resources tracking and investigating the rapidly evolving situation and ordered extensive changes to California's wholesale markets.¹⁷³ Meanwhile, California also attempted to remedy its beleaguered power sector.

In January 2001, the California Legislature enacted a law reforming the CAISO, a non-profit corporation created by the state and approved by FERC as an RTO pursuant to Order No. 888.¹⁷⁴ The law directed the Governor to replace the CAISO board with new members. The Governor's appointees included two state employees. That same week, the Governor ordered a state agency to buy power on the wholesale market that the state's financially struggling IOUs would have otherwise purchased to meet consumer demand. Three weeks later, a power generation company filed a complaint at FERC about various CAISO actions and its new state-appointed board. The company argued that because a state agency was now a significant market participant, the presence of two state employees on the CAISO board violated FERC's independence principle. Moreover, the company claimed that the state's law empowering the Governor to appoint the new board was preempted by a December 2000 FERC order that instructed CAISO to reform its Board pursuant to FERC's directions. CAISO did not comply with FERC's order about its board composition and instead, in April 2001, it filed at FERC amendments to its corporate bylaws that reflected the new board structure imposed by California.

In July 2002, approximately eighteen months into the state-appointed board's tenure and one year after wholesale prices returned to normal levels, FERC addressed the CAISO board's "independence problem."¹⁷⁵ FERC rejected CAISO's California-imposed bylaws and directed CAISO to replace its state-

171. See, e.g., James L. Sweeney, *The California Electricity Crisis: Lessons for the Future* (2002), <https://perma.cc/BTM9-DXPE> ("California's experience in electricity deregulation cast a pall on movements towards deregulation throughout the United States. Some have said that the California experience shows that deregulation cannot and does not work."); William W. Hogan, *California Electricity Market: Policy Meltdown*, Harvard Kennedy School Faculty Seminar (Feb. 14, 2001), <https://perma.cc/7HHW-BLPU> ("National progress in implementing the advance of regional transmission organizations under the Millennium Order (Order 2000) hangs in the balance. Time is running out."); Tyson Slocum, *The Failure of Electricity Deregulation: History, Status, and Needed Reforms*, PUBLIC CITIZEN, at 5 (Mar. 2007), <https://perma.cc/Y6TW-Q3YE> (noting that "in response to fears after the California energy crisis," eight of the 24 states had passed utility restructuring laws repealed or significantly delayed action).

172. *Californians for Renewable Energy, Inc. v. Sellers of Energy and Ancillary Servs.*, 119 FERC ¶ 61,058 at P 30 (2007).

173. See, e.g., *San Diego Gas & Elec. Co., v. Sellers of Energy and Ancillary Services into Markets Operated by the CAISO and CALPX*, 95 FERC ¶ 61,115 (2001) (summarizing previous orders and imposing additional reforms).

174. *Mirant et al., v. CAISO, et al.*, 100 FERC ¶ 61,059 at PP 7-17 (2002) (recounting the history that I summarize in the text).

175. *Id.* P 6 (2002).

appointed board with an independent board. FERC supported its order with three distinct factual findings. First, FERC concluded that CAISO “is not sufficiently independent to operate its interstate transmission facilities on a non-discriminatory basis” because its “decision-making process is heavily influenced, if not completely dictated, by one stakeholder (i.e., the State).”¹⁷⁶ Second, the state-run board “poses a barrier to the implementation of market redesigns that are necessary to rehabilitate the CAISO and Western markets.”¹⁷⁷ Third, FERC found that the state-appointed board raised “jurisdictional issues.” In particular, “pervasive control over a public utility by the State conflicts” with FERC’s regulation of wholesale markets and transmission, interferes with CAISO’s filing rights under section 205, and “conflicts with the independence requirements of Orders No. 888 and 2000” and FERC’s December 2000 order about the CAISO board.¹⁷⁸ CAISO and two state agencies petitioned the D.C. Circuit to review FERC’s orders.

Meanwhile, as that litigation was pending before the D.C. Circuit, FERC took the first of two actions against CAISO for its non-compliance with the independence principle. First, FERC revoked CAISO’s authority to administer and enforce certain market monitoring provisions of its tariff.¹⁷⁹ FERC explained that its approval of CAISO’s market monitoring functions was premised on the monitoring staff being “part of an independent entity.”¹⁸⁰ Second, in a separate order finalized just after the D.C. Circuit issued its decision, FERC rejected CAISO’s proposal for complying with FERC’s generator interconnection rules because “CAISO’s board had failed to meet the independence requirement for ISO status.”¹⁸¹ As noted above, FERC’s interconnection rules provided compliance flexibility for RTOs on the basis that such “independent entities” are “less likely to discriminate [in the interconnection process] than a market participant.”¹⁸² Because FERC found that CAISO was not independent, it rejected CAISO’s attempt to take advantage of the interconnection rules’ flexibility.

In June 2004, nearly four years after FERC ordered CAISO to fire its board, the D.C. Circuit held that “FERC simply has no authority” to “order a public utility subject to its regulation to replace its governing board.”¹⁸³ FERC argued that its authority under FPA section 206 to remedy utility “practices . . . affecting” jurisdictional rates, allowed it to address CAISO’s discriminatory governance. Referring to its factual findings, FERC told the court that CAISO’s “lack of independence has an unduly discriminatory effect on the Western market, [] interferes with the Commission’s exclusive jurisdiction to assure rates are just and reasonable, [and] leads to the perception of discrimination, which impedes the proper functioning of market forces.”¹⁸⁴

176. *Id.* at PP 49–50

177. *Id.* at P 49. FERC cited a U.S. Government Accountability Office report that “detailed how State control of the CAISO has resulted in the impression that the CAISO will not provide equal treatment to market participants.” *Id.* at P 52.

178. *Id.* at PP 54–56.

179. *Cal. Indep. Sys. Indep. Operator*, 106 FERC ¶ 61179 at P 154 (2004).

180. *Id.*

181. *Cal. Indep. Sys. Indep. Operator, et al.*, 108 FERC ¶ 61,104 at P 24 (2004).

182. *Id.* (citing *CAISO*, 100 FERC ¶ 61,059 at PP 1–2 (2002)).

183. *Cal. Indep. Sys. Indep. Operator*, 372 F.3d at 398.

184. FERC Brief, D.C. Circuit Docket No. 02-1287, at 24 (Mar. 2, 2004).

The D.C. Circuit panel ignored the facts connecting CAISO's board to FERC's legal authority and instead jumped to the conclusion that FERC simply may not "re-make the corporate governance of regulated utilities."¹⁸⁵ The panel held FERC has authority only over "rates, charges, classifications, and closely related matters."¹⁸⁶ FERC's authority over utility "practices" is best understood as referring to "actions habitually being taken by a utility in connection with a rate found to be unjust or unreasonable."¹⁸⁷ The D.C. Circuit panel believed that accepting FERC's broader understanding of "practices" would have "staggering" implications, as FERC could then claim authority over executive and board appointments over any utility, including publicly traded utility companies.

Although FERC lost the *CAISO* case, it was not without options. The panel explained that "if FERC concludes that CAISO lacks the independence or other necessary attributes to constitute an RTO for purposes of Order No. 888, then it need not approve CAISO as an RTO."¹⁸⁸ RTO membership is "merely a method jurisdictional entities can use to comply with Order No. 888's mandate for those entities to file nondiscriminatory open access tariffs." FERC could "define[] RTOs according to the terms it wishes" and has "authority not to accept something which it does not deem an RTO."¹⁸⁹

One year later, in May 2005, CAISO filed a new board selection process that it claimed "contained many of the features" prescribed by FERC years earlier.¹⁹⁰ FERC quickly approved it, finding that the "board selection process will help ensure that market participants will not be able to unduly influence the Board and that CAISO is sufficiently independent to provide services on a non-discriminatory basis."¹⁹¹ FERC observed that the state's role in the market had diminished and that it would revisit CAISO's independence only if it "find[s] evidence that any market participant exerts undue influence over CAISO's governance structure."¹⁹² In concurrently issued orders, FERC revisited CAISO's market monitoring and interconnection rules in light of its conclusion that CAISO now met FERC's independence principle.¹⁹³ These orders mark the only times that FERC induced compliance with independent governance rules by refusing to certify a non-compliant entity as independent and then denying compliance options reserved to independent entities. In Part VI, I suggest that FERC replicate this approach to induce governance reforms.

FERC does sporadically audit RTO independence. Through in-person visits, document reviews, and interviews, FERC's staff determine whether RTOs are

185. *Cal. Indep. Sys. Indep. Operator*, 372 F.3d at 400.

186. *Id.*

187. *Id.*

188. *Id.* at 403.

189. *Id.* at 404 (ISO in original).

190. CAISO Petition for a Declaratory Order, Docket No. EL05-114, May 13, 2005.

191. *Cal. Indep. Sys. Indep. Operator*, 112 FERC ¶ 61,010 at P 24 (2005).

192. *Id.* at P 36.

193. See *Cal. Indep. Sys. Indep. Operator*, 112 FERC ¶61,001 (2005) and *Cal. Indep. Sys. Indep. Operator*, 112 FERC ¶ 61,009 (2005).

following their own written procedures.¹⁹⁴ FERC audits do not interrogate whether the governance structures and processes outlined in various RTO documents actually prevent a particular class of market participants from controlling regional decisionmaking or interfering with RTO independence. FERC's rules require an initial independence audit within two years of an RTO's commencement, and FERC has subsequently followed up with one or two additional audits per RTO that include independence.¹⁹⁵ FERC's audits have occasionally uncovered non-compliance with implementation of the independence principle, although infractions are typically minor.¹⁹⁶

In 2008, FERC tacked on one additional governance requirement to support independent decisionmaking. FERC ordered each RTO to demonstrate its board's "willingness, as evidenced in its practices and procedures, to directly receive concerns and recommendations from customers and other stakeholders, and to

194. See, e.g., Letter Order, Docket RT04-2-017, Feb. 9, 2009. The enclosed audit report explains the report's "scope and methodology":

To address audit objectives, audit staff: reviewed responses to data requests; interviewed ISO-NE employees, including ISO-NE legal counsel, human resources staff, and the Chief Financial Officer/Chief Compliance Officer; reviewed publicly available materials; participated in conference calls; and tested the specific provisions in ISO-NE's Code of Conduct to determine whether ISO-NE was complying with its own written procedures.

FERC staff's report about MISO similarly outlines its "scope and methodology": "We evaluated MISO's compliance with the independence requirements and regulations required by 18 C.F.R. § 35.34(j)(1). Specifically, we reviewed Board member independence, securities divestiture policies, prohibitions to affiliations with market participants, Board and RTO Committee policies, and RTO decisional processes." Letter order approving and directing Midwest Independent Transmission System Operator, Inc's recommended corrective actions, Docket No. RT01-87-009 (Jan. 20, 2006).

195. *PJM Interconnection, MISO*, 106 FERC ¶ 61,168 (2004) (waiving the audit requirement for PJM and MISO). FERC initially rejected ISO New England's request for a waiver, *ISO New England*, 121 FERC ¶ 61,109 (2007). ISO-NE then filed a report, which FERC staff found deficient. Deficiency Letter, FERC Docket No. RT04-2-017 (Jan. 5, 2009). But a separate FERC staff office then initiated its own audit, effectively obviating the need for ISO-NE to remedy its deficient audit. Letter Order, FERC Docket RT04-2-017 (Feb. 9, 2009).

196. Letter order approving and directing Midwest Independent Transmission System Operator, Inc's recommended corrective actions, FERC Docket No. RT01-87-009 (Jan. 20, 2006) (finding that MISO's high-level stakeholder committee had not been using sector-weighted voting, as required by its governance documents); Letter to California Independent System Operator Corporation submitting the audit report explaining audit findings and recommendations, FERC Docket No. PA11-16 (Oct. 17, 2011) (suggesting modest changes to policies aimed at CAISO employees, such as reducing the value of gifts employees may accept from market participants); Letter to Southwest Power Pool and attached Audit Report, FERC Docket No. PA15-6 (Jul. 15, 2016) (noting that an SPP board member was affiliated with a law firm and company that does business with SPP utilities and recommended that SPP assess whether those "potential conflicts of interest" are disqualifying). As of October 2023, FERC staff was conducting an audit of MISO in FERC Docket No. PA21-2. Several audits considered independence and made no adverse findings. Letter to PJM Interconnection, FERC Docket No. RT01-2-013, Dec. 20, 2005; *ISO-NE*, 129 FERC ¶ 61,070 (2009); *New York Independent System Operator*, 127 FERC ¶ 61,120 (2009); Audit of MISO, FERC Docket No. PA08-28, Jun. 9, 2009; *PJM Interconnection*, 132 FERC ¶ 61,173 (2010). Other audits focused on the independence of each organization's market monitoring unit from management. Letter Order Approving SPP Audit, FERC Docket No. PA15-6, Jul. 15, 2016; Letter Order Approving CAISO Audit, FERC Docket No. PA17-3 (Sep. 14, 2018). Additional RTO audits did not discuss independence. two audits focused Staff audits of MISO and ISO-NE were about implementation of a 2011 FERC transmission planning rule as well as rules on accounting, reporting, and record retention. They do not mention independence or governance. Letter Order Approving MISO Audit, Docket No. PA16-5, Apr. 18, 2018; Letter Order Approving ISO-NE Audit, FERC Docket No. PA16-6 (Apr. 18, 2018). Audits of NYISO and PJM were mostly about market administration issues. Letter Order Approving NYISO Audit, Docket No. PA19-1 (Jul. 7, 2020); Letter Order Approving PJM Audit, FERC Docket No. PA19-2 (Sep. 1, 2021).

fully consider and take actions in response to the issues that are raised.”¹⁹⁷ FERC established four criteria for evaluating each RTO board’s “responsiveness” to members and stakeholders: “(1) inclusiveness; (2) fairness in balancing diverse interests; (3) representation of minority positions; and (4) ongoing responsiveness.”¹⁹⁸ FERC claimed its review of RTO responsiveness would ensure that RTO boards and stakeholders routinely communicate and that boards “equitably consider” all customer or stakeholder views.¹⁹⁹ FERC hoped that formal communications between the board and market participants would reinforce “confidence in RTOs’ . . . independent governance processes.”²⁰⁰

FERC’s order led to few reforms. In response to compliance filings by the RTOs, FERC concluded that each of the RTOs’ “existing governance procedures and stakeholder processes meet the requirements.”²⁰¹ Nonetheless, FERC’s responsiveness criteria set a floor for RTO boards’ engagement with its members and stakeholders that remain binding on RTOs. FERC has not taken any subsequent actions to enforce the responsiveness criteria and has never proposed to revisit those criteria or add new aspects to independent governance.

D. FERC Maintains It Has Jurisdiction over RTO Governance and Approves New Regional Governance Arrangements

Although FERC has not imposed new rules about RTO governance, it has reiterated in two proceedings that it has jurisdiction to do so. In 2016, FERC approved funding through the PJM tariff of a new non-profit organization that would coordinate the participation of state consumer advocates in PJM internal decisionmaking processes. In rejecting a generator’s argument that FERC has no authority to approve recovery of costs related to stakeholder participation, FERC concluded that “stakeholder process [] provides input that directly affects the content of jurisdictional practices.”²⁰² The stakeholder process, FERC determined, was “a practice that affects the setting of rates, terms, and conditions of jurisdictional services of the type that the Supreme Court has held falls within the Commission’s jurisdiction,”²⁰³ and the funding was “a legitimate business

197. Order No. 719, *supra* note 10, at P 477 (2008). The importance of “responsiveness” was evident from FERC’s RTO formation orders. See *Alliance Companies, et al.*, 94 FERC ¶ 61,070, at p. 61,304 (2001). (According to FERC, “if RTOs are to be responsive to the needs of the market, there must be a meaningful and efficient process for communication and consultation that serves not only the needs of the RTO, but also the needs of stakeholders.”).

198. Order No. 719, *supra* note 10, at P 477.

199. *Id.* at P 482 (explaining the four criteria); *id.* at P 510 (“Taken together, the criteria require that RTO and ISO boards be fully aware of the positions of customers and other stakeholders to ensure that issues are fully and fairly vetted.”).

200. *Id.* at P 503.

201. *PJM Interconnection*, 133 FERC ¶ 61,071 at P 35 (2010); *MISO*, 133 FERC ¶ 61,068 at P 44 (2010); *NYISO*, 133 FERC ¶ 61,072 at P 26 (2010); *SPP*, 133 FERC ¶ 61,069 at P 33 (2010); *CAISO* 133 FERC ¶ 61,067 at P 40 (2010). ISO-NE was the only RTO to propose any revisions to its stakeholder and board processes. Nonetheless, in its compliance filing, ISO-NE argued that its then-existing processes met FERC’s responsiveness criteria. See ISO-NE filing, FERC Docket No. ER09-1051 (Apr. 28, 2009). FERC’s order approving ISO-NE’s amendments and compliance with the responsiveness criteria does not specify whether those amendments were necessary for meeting the responsiveness criteria.

202. *PJM Interconnection*, 157 FERC ¶ 61,229 at P 11 (2016).

203. *Id.*

expense of PJM because it facilitates fulfillment of a PJM obligation under the PJM Operating Agreement.”²⁰⁴

In 2019, FERC similarly concluded that it has jurisdiction over membership rules for NEPOOL, which conducts ISO-NE’s stakeholder processes. FERC explained that because NEPOOL votes can “signal” stakeholder approval to FERC and can cause ISO-NE to file proposals at FERC, NEPOOL’s membership rules “directly affect” the filings FERC receives and therefore directly affect FERC-jurisdictional rates.²⁰⁵ However, in a related proceeding, FERC held that it did not have jurisdiction to order NEPOOL to rescind its prohibition on media access to its meetings. FERC reiterated that while it has jurisdiction over stakeholder processes and membership rules that directly affect rates, attendance by non-voting media members “lacks a direct effect on filings submitted to the Commission.”²⁰⁶ FERC summarized that the “contested attendance and reporting policies are too attenuated from NEPOOL’s voting process to directly affect jurisdictional rates.”²⁰⁷

Since Order No. 1000, FERC has approved three new regional governance arrangements: 1) CAISO’s expansion of its short-term coordination services market to utilities that are not CAISO members; 2) SPP’s competing Western Energy Imbalance Service Market (WEIS Market) that operates independently of SPP’s RTO markets; and 3) the Western Resource Adequacy Program (WRAP), a new voluntary framework for resource adequacy planning and trading among western utilities.²⁰⁸ All three arrangements are overseen by independent boards. In CAISO, the existing board and an independent WEIM governing body created by CAISO must each approve a rule change before it is filed at FERC.²⁰⁹ In SPP, a market participant committee proposes changes to WEIS rules, and absent any appeal to the SPP board, SPP files the committee’s rules at FERC.²¹⁰ Market participant committees and state regulators advise the WRAP board on rule changes.²¹¹ As far as I can tell, FERC’s jurisdiction over governance was not questioned in these proceedings.

E. Regional Transmission Planning Proves Ineffective Without Independent Governance

FERC’s long-standing efforts to stimulate regional transmission development illustrate the value of independent governance. In 2007, FERC required each transmission provider (RTOs and IOUs) to formalize transmission development by outlining planning procedures in a transmission tariff.²¹² FERC’s prior Open-Access transmission rules had included only “minimal” guidance on

204. *Id.* at P 12.

205. *New England Power Pool Participants Committee*, 166 FERC ¶ 61,062 at P 48 (2019).

206. *RTO Insider LLC v. New England Power Pool Participants Committee*, 167 FERC ¶ 61,021 at P 48–49 (2019).

207. *Id.* at P 51.

208. *CAISO*, 147 FERC 61,231 (2014); *SPP*, 173 FERC ¶ 61,267 (2020); *Northwest Power Pool*, 182 FERC ¶ 61,063 (2023). FERC also approved the Southeastern Energy Exchange Market, but the relevant orders were vacated by the D.C. Circuit. *Advanced Energy United v. FERC*, 82 F.4th 1095 (D.C. Cir. 2023).

209. CAISO, Western EIM Governance Review (Jul. 19, 2021), <https://perma.cc/MG9F-3JZS>.

210. 173 FERC ¶ 61,267 at PP 52, 67.

211. 182 FERC ¶ 61,063

212. Order No. 890, *supra* note 15.

transmission planning, and FERC grew concerned that transmission development might be biased in favor of IOUs' financial and strategic goals.²¹³ FERC concluded that it could not "rely on the self-interest of [IOUs] to expand the grid in a nondiscriminatory manner,"²¹⁴ and therefore ordered IOUs to sketch out non-discriminatory planning processes that met FERC's newly created transmission "planning principles," such as openness and transparency.²¹⁵

Four years later, FERC expanded on the pro-competition premise of the 2007 planning rule. In Order No. 1000, FERC found that transmission development outside of RTOs was suboptimal. Each IOU planned for its own needs without any formal process with its neighbors that attempted to identify transmission projects that could more efficiently meet regional market and reliability needs than the projects planned by each individual IOU.²¹⁶ To remedy this deficiency, FERC ordered each IOU to participate in a regional planning process.

FERC rejected the need for independent governance over non-RTO planning processes and instead believed that it could discipline IOU self-interest and stimulate regionally beneficial transmission planning with procedural rules.²¹⁷ FERC demanded that: 1) regional projects be developed through competitive processes open to non-utility companies; 2) tariffs outline non-discriminatory criteria for evaluating potential regional projects and methodologies for allocating costs of those projects to regional utilities; and 3) all planning processes meet the openness, transparency, and other planning principles FERC announced in its 2007 rule. With these guardrails in place, FERC expected meaningful development. Instead, the non-RTO utility planning alliances have thus far been perfectly effective at forestalling regional transmission development. In the decade since Order No. 1000 went into effect, the non-RTO IOU alliances have not planned a single regional project.²¹⁸

IOUs fought back against regional planning on two fronts. First, IOUs filed suit in a federal appeals court arguing that FERC had no legal authority to mandate regional planning or require competitive transmission development.²¹⁹ As their unsuccessful litigation against Order No. 1000 was playing out, IOUs also

213. *Id.* at P 26 (concluding that its prior Open-Access transmission rules left IOUs with "both the incentive and the ability to discriminate against third parties, particularly in areas where [FERC's rules] left the transmission provider with significant discretion," such as transmission expansion); *id.* at PP 422–424 ("For example, a transmission provider does not have an incentive to relieve local congestion that restricts the output of a competing merchant generator if doing so will make the transmission provider's own generation less competitive."); *id.* at P 524 ("[I]t is not in the economic self-interest of transmission providers to expand the grid to permit access to competing sources of supply.").

214. *Id.* at PP 39, 422.

215. *Id.* at PP 418–603.

216. *See, e.g., Duke Energy Carolinas, et al.*, 147 FERC ¶ 61241 at P 452 (2014) (outlining the premise of FERC's regional planning mandate).

217. Order No. 1000-A, 139 FERC ¶ 61,132 at P 238 (2012) (summarizing comment that urged FERC to require "nondiscriminatory governance and decision-making procedures" in non-RTO regions to protect non-IOU parties); *id.* at PP 267–269 (rejecting the need for independent governance or any particular governance rules, other than oversight of the non-discriminatory project selection criteria).

218. Note of Proposed Rulemaking, *Building for the Future Through Electric Regional Transmission Planning and Cost Allocation and Generator Interconnection*, 179 FERC ¶ 61,028 at P 39 (2022).

219. *S.C. Pub. Serv. Auth. v. FERC*, 762 F.3d 41 (D.C. Cir. 2014) (upholding FERC's order, although concluding that IOUs could challenge the prohibition of so-called rights-of-first-refusal that automatically delegated project development opportunities to IOUs in compliance proceedings at FERC).

attempted to undermine FERC's pro-competition goals through the compliance process. For instance, IOUs participating in the Southeastern Regional Transmission Planning (SERTP) group proposed to meet FERC's regional planning mandate by combining each individual utility member's local plan into a single regional document and allowing developers to propose additional or alternative projects.²²⁰ IOUs designed the process to create insurmountable barriers to new entrants, as it was exceedingly unlikely that an IOU would choose a competitor's project, particularly if it displaced the IOU's own investment. FERC rejected this approach and instructed the IOUs to "conduct a regional analysis themselves." But this, too, was doomed to fail. An impartial regional analysis would pit IOUs against each other and force them to compete against non-IOU developers.²²¹ FERC's procedural requirements could not create a level playing field that would prevent IOUs from either favoring their own projects or shunning regional planning entirely and instead developing projects through local processes that each IOU controlled.

SERTP IOUs also tried to sneak in numerous provisions into their planning procedures that would have limited the scope of the regional process. FERC rejected their attempts to "unreasonably limit,"²²² "inappropriately exclude,"²²³ "categorically disqualify,"²²⁴ "dismiss outright,"²²⁵ or "categorically preclud[e] consideration of,"²²⁶ potential projects, as well as conditions that would erect an "unreasonable barrier,"²²⁷ be "prohibitive"²²⁸ or "significantly limit"²²⁹ participation of non-utility developers. After the SERTP IOUs' fourth filing, FERC approved their planning process, but it was obvious from their three prior proposals that the SERTP IOUs had no intention of developing regional transmission together.

IOU discretion undermined FERC's hopes for regional transmission development.²³⁰ FERC's 2007 rule recognized that process-oriented transmission rules left IOUs with substantial discretion in implementing their tariffs.²³¹ In exercising their discretion, IOUs have "opportunities to unduly discriminate"

220. *Louisville Gas & Electric, et al.*, 144 FERC ¶ 61,054 at PP 50–57 (2013).

221. *Id.* at PP 58–64.

222. *Duke Energy Carolinas, et al.*, 147 FERC ¶ 61,241 at PP 100–101 (2014).

223. 144 FERC ¶ 61,054, at P 78 (2013); 147 FERC ¶ 61,241 at P 145 (2014).

224. 144 FERC ¶ 61,054 at P 81 (2013).

225. 147 FERC ¶ 61,241 at P 144 (2014).

226. 144 FERC ¶ 61,054 at P 115 (2013).

227. *Duke Energy Carolinas, et al.*, 151 FERC ¶ 61,021 at P 88 (2015).

228. 147 FERC ¶ 61,241 at P 282 (2014).

229. 144 FERC ¶ 61,054 at P 78 (2013).

230. Regional transmission development was already a national policy goal prior to Order No. 1000. The Energy Policy Act of 2005 includes federal transmission siting authority, transmission development incentives, formal creation of regional reliability organizations, federal transmission financing programs through existing power marketing agencies, and improvements to FERC's Open Access rules. The 2002 National Transmission Grid Study, published by the U.S. Department of Energy, promotes regionalization. Prior to that, the Federal Power Commission's 1964 National Power Survey similarly promoted regionalization. Citations to the 2005 study and 1964 survey are at note 17. FPA section 202, enacted in 1935, demands that FERC promote regionalization. 16 U.S.C. § 824a. This is one of FERC's core duties. See *Utility Transmission Syndicate, supra* note 12, at 6–8, 18, 36–37 (discussing section 202).

231. Order No. 890, *supra* note 15, at P 41 (finding it "undisputed" that tariffs provided IOUs with "wide discretion" over transmission planning).

against potential competitors.²³² FERC hoped to constrain IOU discretion in planning by requiring third-party access to data and planning models and non-discriminatory participation. But because FERC left IOUs in charge of administering these processes, IOUs retained opportunities to favor their own interests.²³³ In Order No. 1000, FERC doubled down on IOU discretion, repeatedly emphasizing that transmission providers have significant “flexibility” in creating their own processes, which provided them with further leeway to tilt planning so it benefits their interests.²³⁴

Independently administered planning is not a panacea. As I describe in Part V.C, IOUs’ formal authority over planning and cost allocation rules and informal influence in regional planning interferes with RTOs’ efforts. But the Order No. 1000 experience shows that independence is a pre-requisite. Without independent administration, IOUs will fight against transparency to obscure their operations and planning and insulate their dominant control from scrutiny and competition.

V. FERC SHOULD REVIVE ITS INDEPENDENT GOVERNANCE AGENDA

A regional power system is run by its rules. RTO-administered markets and planning are governed by technical rules that are enshrined in FERC-regulated agreements and tariffs, further developed in RTO-written and self-approved business practice manuals, and implemented by RTO staff and market participants. My investigation of regional grid governance therefore focuses on rulemaking processes that govern market participation and transmission development.

In this part of the paper, I focus on the governance of the four multi-state RTOs: ISO-NE, Midcontinent System Operator (MISO), PJM, and Southwest Power Pool (SPP). RTO boards and staff hold most of the formal authority to file amendments at FERC, write and approve business practice manuals, and create regional transmission expansion plans. These RTOs use member- or stakeholder-driven processes that generally make non-binding recommendations to RTO boards about rule changes, but in some instances can compel the RTO to propose specific rules to FERC.²³⁵ My review of RTO governance focuses on how RTO independence is compromised through: 1) governance stagnation, which entrenches power and influence; and 2) IOUs’ filing rights.

A. Governance Stagnation Benefits Incumbents

FERC’s independence principle encompasses “fair representation” and “neutrality” standards that require RTOs to provide “all users” with representation

232. *Id.* at PP 26; *id.* at PP 39–41, 68, 88, 422–424, 524.

233. *Id.* at P 68 (discussing IOU calculations of available transmission capacity and commenting that IOU “discretion is a significant problem because calculation[s] varies greatly depending on the criteria and assumptions used, [which] may allow the transmission provider to discriminate in subtle ways against its competitors”).

234. Order No. 1000, *supra* note 10, at P 61 (“[T]his Final Rule accords transmission planning regions significant flexibility to tailor regional transmission planning and cost allocation processes to accommodate these regional differences.”); *id.* at PP 149, 157, 208, 227; Order No. 1000-A, *supra* note 217, at P 283 (2012) (affirming that transmission providers may use “flexible criteria or bright-line metrics” to determine which projects are in the regional plan).

235. Stephanie Lenhart & Dalten Fox, *Participatory Democracy in Dynamic Contexts: A Review of Regional Transmission Organization Governance in the United States*, 83 ENERGY RSCH. & SOC. SCIENCE 102345 (Jan. 2022) [hereinafter Lenhart & Fox on Participatory Democracy].

in decisionmaking processes and prevent any particular type of user from controlling RTO decisionmaking.²³⁶ To implement these requirements, RTOs group their market-participant members or other stakeholders into “sectors.” Key RTO-member committees, that either hold tariff “filing rights” or influence the RTO Board’s filing decisions, act through sector-based voting.

With few exceptions, RTO sectors and weightings of these sectors in voting processes are unchanged since FERC approved them twenty to twenty-five years ago. This static structure hampers the ability of a new entrant to advance its agenda through RTO processes.²³⁷ Moreover, membership in some sectors is mostly the same firms that initially populated the sector, which entrenches the influence of long-standing members. Finally, the sectors are self-governing, and incumbents have imposed barriers to entry in the sector. In this section, I explain how these factors play out in PJM to benefit incumbents.

PJM has five sectors: transmission owners, generation owners, electric distributors, end-use customers, and other suppliers. FERC approved these sectors when the PJM IOUs proposed to create an RTO in the mid-1990s, finding that these five sectors “fairly represent the broadest possible users of the RTO.”²³⁸ But in its 2002 Standard Market Design proposal, FERC seemed to regret its prior decision. It found that stakeholder sectors across the RTOs “tend to replicate the functions of vertically integrated utilities” and called out PJM sectors as weighted against consumers and demand-side technologies.²³⁹ FERC then recognized the link between governance and innovation, suggesting that PJM’s “sector structure could discourage the introduction of changes that implement new demand management technologies and services, one of the biggest potential outgrowths of the move towards a competitive market.”²⁴⁰

Yet PJM’s original five sectors remain intact. For the past fifteen years, membership in three of the sectors has been static, but membership in the supply-side sectors (generation owners and other suppliers) doubled in the 2010s.²⁴¹ These sectors lump together members with diverse interests, such as fossil and renewable generators as well as financial traders and companies that pay consumers to use less energy.²⁴² In one of her insightful papers on RTO governance, Christina Simeone finds that the growth and diversity of interests

236. Christina Simeone, *Reforming FERC’s RTO/ISO Stakeholder Governance Principles*, 34 ELEC. J. 106954 (2021) [Hereinafter Simeone on Reforming Governance Principles] (explaining FERC’s independence principle as quoted *supra* note 134 and associated text).

237. Lenhart & Fox on Participatory Democracy, *supra* note 235, at 10–11 (“To the extent RTO stakeholders have changed over time, the existing sector designations may not long adequately demonstrate RTO governance independence or effectively engage a broad range of interests.”).

238. *PJM Interconnection*, 81 FERC ¶ 61,257, at p. 62,263 (1997) (ISO in original).

239. Standard Market Design NOPR, *supra* note 88, at P 561.

240. *Id.*

241. Simeone on Reforming Governance Principles, *supra* note 236, at 3–4.

242. *Id.* Lenhart and Fox elaborate that “sector membership often includes a diversity of interests *within* a sector.” For instance, “in some RTOs, the end use sector strictly represents large industrial or commercial users. In other RTOs, these stakeholders are grouped with consumer advocates, and in two RTOs the end user’s sector includes environmental organizations.” Lenhart & Fox on Participatory Democracy, *supra* note 235, at 8.

within these two sectors “complicates caucusing, inhibits the ability to reflect the needs of new entrant groups, and results in significant per firm vote dilution.”²⁴³

Take the case of a hypothetical battery developer that wants to change PJM’s rules so they better facilitate this relatively new technology.²⁴⁴ To succeed in the committee-based rule development processes I describe in the next section, the developer must build a coalition of PJM members that support its goals. The battery developer might join the “other supplier” sector, but finding allies may not be easy.²⁴⁵ This sector captures “an extremely wide range of existing or potential market players.”²⁴⁶ As Stephanie Lenhart and Dalten Fox observe, “stakeholders in a large heterogeneous sector will have relatively less voting power than stakeholders in a small homogeneous sector.”²⁴⁷

Even if our battery developer is joined in that sector by dozens of other new battery developers, they would constitute just a small minority of the 312 voting-member sector.²⁴⁸ Without allies in its own sector, the developers might seek support from other sectors. For instance, some generation owners might pursue storage investments and therefore benefit from new rules, or distributors might value storage’s ability to reduce peak power prices. This cross-sector collaboration, however, may be contingent on the new entrant aligning its interests with incumbents in other sectors, which may further “an institutional bias toward incumbent approaches.”²⁴⁹

Alternatively, our hypothetical battery developer might join the generation owner sector.²⁵⁰ The dynamics of this sector are shifting. The generation owner

243. Simeone on Reforming Governance Principles, *supra* note 236, at 3. *See also* Lenhart & Fox on Structural Power, *supra* note 6, at 13 (“Similarly, efforts to allow participation in governance through the existing membership sectors and committee hierarchies in SPP and ISO-NE have limited the participation and influence of new market entrants in developing the RTO market design, operating practices, or planning processes.”).

244. FERC ordered all RTOs to ensure that their rules recognize the physical and operational characteristics of electric storage devices and facilitate their participation in RTO markets. FERC Order No. 841, *supra* note 10, at P 1 (2018). Storage developers participated in RTO processes that proposed to FERC how they would comply with that directive. In some proceedings, developers protested RTO proposals that FERC approved. A new storage developer might want to convince the RTO to propose superseding rules.

245. *See* Amended and Restated Operating Agreement of PJM Interconnection, LLC, § 1 (last visited Sep. 15, 2023), <https://perma.cc/54MA-DVDW> [Hereinafter PJM Operating Agreement] (defining Generation Owner and Other Supplier).

246. Christina Simeone, *PJM Governance: Can Reforms Improve Outcomes*, KLEINMAN CTR. FOR ENERGY POL’Y, at 35 (2017), <https://perma.cc/9M9X-G3G9> [Hereinafter Simeone on PJM Governance] Members of this sector may be indifferent to the battery developer’s agenda. For instance, to the extent that storage can reduce price volatility, energy traders that profit from that volatility might oppose rules that can benefit storage. Energy traders are in the other supplier sector. *See* Tingli Hu & Caisheng Wang, *The Impact of Optimally Dispatched Energy Storage Devices on Electricity Price Volatility*, 137 INT’L J. OF ELEC. POWER & ENERGY SYS. 107810 (May 2022) (investigating how storage can reduce price volatility).

247. Lenhart & Fox on Participatory Democracy, *supra* note 235, at 10.

248. PJM Interconnection, Membership List (as of May 18, 2023), <https://perma.cc/JZX9-KZLE>.

249. Lenhart & Fox on Structural Power, *supra* note 6, at 13 (discussing battery developers’ participation in RTO processes and summarizing that due to stagnant sectors “new market entrants must align with a particular business model or service, such as generation or transmission, despite having capabilities and interests that span existing groups or differ from others in the group. Unaddressed, these structural misalignments create an institutional bias toward incumbent approaches.”); *id.* (noting “previous research that suggest self-reinforcing interests contribute to the ability of legacy electricity industry actors to exert influence [in RTO processes] through strategic action”).

250. Although the definition of generation owner in the PJM Operating Agreement suggests that a battery owner would not be eligible for this sector, this sector has at least two battery-only developers.

sector has been controlled by owners of legacy assets that pre-date Open Access transmission and owners of newer natural gas fired plants that benefited from Open Access rules. In general, these incumbents defend the status quo, agreeing with PJM's assessment nearly a decade ago that the then-effective rules "successfully attracted significant new merchant investment in generating plants."²⁵¹ Newer entrants, particularly wind and solar developers, argue that rules were designed around legacy technologies and must be changed to enable their resources to participate fairly in the market. I will not litigate these arguments here. The salient point for this discussion is that incumbent technologies and business models have historically outnumbered wind and solar firms in the generation owner sector, giving them dominant voting shares and control over sector delegates in key committees.²⁵² However, membership is shifting in favor of clean energy interests, and it seems plausible that while fossil-fuel powered capacity will continue to lead the regional generation mix, clean energy interests could soon have a majority in the generation owner sector.²⁵³ Our hypothetical battery developer will surely find allies in the generation owner sector, but many sector members are prioritizing capacity auction rules and other issues.

Membership in the other three sectors — transmission owners, distributors, and end users — has been stable for nearly three decades. To the extent rule changes require stakeholder support, these static sectors hold a majority. IOUs dominate the smallest but mightiest sector. Ten of the thirteen voting members in the transmission owner sector are IOU holding companies that benefit from state-granted monopolies over local distribution.²⁵⁴ Nine of these companies are publicly traded and have a combined market capitalization of about \$300 billion.²⁵⁵ While the extent to which each company's assets are located in or controlled by PJM varies, the PJM transmission owners have more than \$67 billion invested in PJM transmission.²⁵⁶

PJM IOUs' valuations are almost entirely dependent on cost-of-service rates regulated by FERC or state regulators.²⁵⁷ Like much of the utility industry, PJM

251. PJM Interconnection, Resource Investment in Competitive Markets, 23 (May 5, 2016), <https://perma.cc/J79F-7FMU>.

252. Sector delegates reflect incumbency dominance. For instance, from 2016 to 2021, an incumbent generator represented the sector on the committee that nominates board members.

253. By my count, as of May 18, 2023, 37% of voting members in the generation sector are predominantly wind and solar developers. It seems very likely that many of these renewable firms are relatively new members, and that renewable developers were far outnumbered in past years. In 2021, a renewable developer represented the sector in a leadership role.

254. PJM Member List, *supra* note 248 (showing "Voting Members" in the "Transmission Owner" sector). The three non-IOUs are East Kentucky Power Cooperative; Linden VFT, a merchant project that connects PJM to New York City; and Neptune Regional Transmission System, a merchant project that connects PJM to Long Island, NY.

255. On May 18, 2023, the market capitalizations of American Electric Power, Duke, Dominion, Consolidated Edison, Public Service Gas & Electric, FirstEnergy, AES, PPL, and Exelon totaled nearly \$320 billion. Duke Energy is the largest (\$72B), while AES is the smallest (\$14B).

256. *Public Service Electric & Gas Co.*, 179 FERC ¶ 61,001 at P 6 (2022).

257. FERC regulates transmission rates. States regulate local distribution for all utilities. For vertically integrated utilities, states also provide cost recovery through cost-of-service rates for generation. Dominion (Virginia), American Electric Power (West Virginia), and FirstEnergy (West Virginia) are the PJM transmission owners that own rate-regulated generation within PJM's footprint. American Electric Power, AES, and Duke

IOUs have largely retreated from competitive lines of business that earned market-based rates.²⁵⁸ Their shift in business strategy coincided with FERC's attempt to open cost-of-service transmission rates to new entrants.²⁵⁹ RTO-member IOUs responded with vigorous opposition to FERC's efforts to facilitate new entry. They zealously protect their near-exclusive access to cost-of-service rates billed through an RTO tariff and tend to speak with one voice on major transmission issues, particular about competition.²⁶⁰ IOUs derive significant value from their exclusive access to cost-of-service rates.²⁶¹

The PJM transmission owners recently took preemptive action to prevent potential new entrants from wielding the transmission owners sector's formal authority. The IOUs changed their sector voting rules to allow a supermajority of ownership interests, measured by combined transmission asset value, to supersede a majority of individual votes. The changes were aimed at ensuring perpetual incumbent control. As the incumbents told FERC, the voting amendments "prevent a tiny minority of Transmission Owners from controlling" the sector,²⁶² and that the amendments would "protect the PJM [Transmission Owners'] substantial investment."²⁶³ FERC approved the new sector voting rules even

own rate-based generation outside of PJM. Public Service Gas & Electric owns nuclear plants that sell energy and capacity through PJM auctions and also benefit from New Jersey state policy that funds the plants through charges assessed on retail ratepayers.

258. *Dominion Resources to sell three merchant power plants*, REUTERS (Sep. 6, 2012) (quoting the CEO as saying that "the sale of these assets and the redeployment of capital to our regulated businesses is the best path forward for shareholders"); Robert Walton, *PPL Completes Spinoff of Competitive Generation Business*, UTILITY DIVE (Jun. 3, 2015) (stating that the "spinoff completes PPL's transition to a company solely focused on regulated utilities"); Sonal Patel, *How Eight Major Power Companies Are Dealing with Market Turmoil*, POWER (Oct. 31, 2017) (reporting that Duke and AES had sold off their merchant assets and AEP had sold more than half of its merchant fleet); Robert Walton, *Dominion to Sell its Stake in 3 Merchant Plants for \$1.3 Billion*, UTILITY DIVE (Sep. 25, 2018) (noting that Dominion had previously sold a merchant coal plant); Sonal Patel, *Exelon to Split Business, Spin Off Generation Segment*, POWER (Feb. 25, 2021) Sonal Patel, *PSEG Agrees to Sell 6.8 GW Fossil Fleet to ArcLight Capital*, POWER (Aug. 12, 2021) (quoting the CEO as commenting that the utility is on track "to realize a more predictable earnings profile"); Christoph Seitz & Thomas Escritt, *Germany's RWE Buys Con Edison Clean Energy in \$6.8 Billion U.S. Shift*, REUTERS (Oct. 2, 2022) (noting that ConEd "said the deal would allow it to focus on its core utility business"); Darrel Proctor, *Vistra Expands Nuclear Portfolio in \$3.4 Billion Deal for Energy Harbor*, POWER (Mar. 6, 2023) (noting that Energy Harbor had once been a subsidiary of First Energy); Duke Energy, Press Release, *Duke Energy to sell utility-scale Commercial Renewables business to Brookfield for \$2.8 billion* (Jun. 12, 2023) (quoting the company CEO that "this sale is an important step in our transition into a purely regulated company"); Ethan Howland, *With First-of-its-Kind PTC Transfer, AEP Sells 1.3 GW of Unregulated Renewables to Invenergy-Led Group*, UTILITY DIVE (Jul. 17, 2023) (quoting AEP's CEO that the "sale is part of our strategy to streamline and de-risk the business and focus on our regulated operations" and that AEP plans to invest \$40 billion in the next five years in rate-regulated assets).

259. See generally FERC Order No. 1000, *supra* note 10.

260. Utility Transmission Syndicate, *supra* note 12, at 47–57.

261. See, e.g., Darren Sweeney, *NiSource Deal's 'Phenomenal Price' Indicates Strong Interest in Utility Stakes*, S&P GLOBAL MARKET INTELLIGENCE (Jun. 23, 2023) (quoting a financial analyst's observation that the utility holding company that sold off a 19.9 percent stake in its Indiana subsidiary "got a phenomenal price" and that the premium over the utility's own valuation was "one of the richest ever for a regulated utility"). Indiana had recently passed a law that effectively granted the utility a monopoly over RTO-planned projects within the state. See Indiana H.B. 1420 (2023).

262. PJM Transmission Owners' Deficiency Notice Response, Docket No. ER22-358, at 6 (Feb. 4, 2022).

263. Section 205 filing transmittal letter, Docket No. ER22-358, at 10 (Nov. 8, 2021) (emphasis added).

though it had repeatedly declined to endorse governance arrangements linked to transmission ownership when IOUs first proposed RTOs in the 1990s.²⁶⁴

IOUs in other RTOs have similar protections against smaller transmission owners. In ISO-NE, transmission owners' votes are weighted by the value of their investments.²⁶⁵ The SPP Bylaws define transmission owning members as those companies that have ceded control of at least 500 miles of transmission to the RTO.²⁶⁶ The agreement between MISO and its transmission owning members allows a minority of transmission owners to take formal action, but only if that minority owns transmission assets worth at least \$2.5 billion.²⁶⁷ These protections in SPP and MISO against smaller transmission owners pre-date FERC's effort to create transmission competition and likely reflect the fact that municipally and cooperatively owned utilities have a significant presence in these regions. These provisions help ensure that IOUs control official sector actions.

As for the final two static PJM sectors, most of the twenty-five end-use customers are factory owners or other industrial interests.²⁶⁸ Voting members also include a real-estate developer, energy services companies, two New Jersey county utility authorities, and the University of Pennsylvania. State consumer advocates, who typically represent the interests of residential utility ratepayers, are non-voting members but have nevertheless controlled sector delegates.²⁶⁹ Nearly all of the forty-four electric distributors are municipally or cooperatively owned utilities or alliances of those entities. Historically, these utilities have relied on IOUs to provide essential transmission service, and there is a long history of animosity between these two camps.²⁷⁰ Electric distributors tend to oppose proposals that aggrandize the RTO by expanding the scope of its planning responsibilities or adding complexities to its markets.²⁷¹

264. The PJM IOUs attempted to justify utility control over RTO decision making as "merely reflects the current fact that the existing PJM members have the largest investment" in transmission facilities and "the greatest responsibilities" to retail ratepayers. Rehearing Request of Nine PJM Utilities, FERC Docket Nos. ER96-2516-002, EC96-28-002, EL96-69-002, ER96-2668-002, EC96-29-002 (Dec. 13, 1996). FERC rejected this proposal. PJM subsequently filed a new governance proposal, which FERC approved. *PJM Interconnection*, 81 FERC ¶ 61,257 (1997). See also *Central Hudson Gas & Electric*, 83 FERC ¶ 61,352, at p. 62,409 ("As in NEPOOL II, the NYPP members contend that they are entitled to such voting power").

265. Participants Agreement among ISO New England and the New England Power Pool, et al., § 7.3.2(b) (2023), <https://perma.cc/Z75K-TTJ9> [hereinafter ISO-NE Participants Agreement]; New England Power Pool Participants Committee Bylaws, § 5.10 (2023), <https://perma.cc/DBR9-HBM9> [hereinafter NEPOOL Participant Committee Bylaws]; New England Power Pool Committee Technical Committee Bylaws, § 5.10 (2023), <https://perma.cc/G3GR-ZF2U>.

266. Southwest Power Pool, Inc. Bylaws, § 1.0 (2023), <https://perma.cc/4X4Z-KL24> [hereinafter SPP Bylaws] (definition of Transmission Owning Member).

267. Agreement of Transmission Facilities Owners to Organize the Midcontinent Independent System Operator, Inc., appendix K, § III.A. (2023), <https://perma.cc/847F-4K8J> [Hereinafter MISO Transmission Owners Agreement].

268. PJM Member List, *supra* note 248.

269. For instance, consumer advocates have represented the sector on the board nominating committee.

270. Utility Transmission Syndicate, *supra* note 12, at 6, 13–19.

271. For instance, municipal utilities have been skeptical of RTOs since their creation (See, e.g. American Public Power Association, *Restructuring at the Crossroads* (2004), <https://perma.cc/L63X-CVAA> ("APPA members located in RTO regions report substantial, across-the-board problems with spiraling RTO costs, unaccountable governance, lack of understanding of transmission customer and end-user needs and less-than satisfactory service options.")).

ISO-NE's has essentially the same five sectors as PJM, with a notable addition.²⁷² In reviewing ISO-NE's RTO proposal, FERC found that "alternative energy providers (e.g., renewable generation, distributed generation, and load response entities) represent an important, emerging presence in the New England electricity market" and therefore required ISO-NE to provide these entities with their own sectors.²⁷³ This sector has a smaller vote share than the others.²⁷⁴

In SPP and MISO, sectors are more diverse. MISO's key committee includes four state regulators; three representatives from each of the following: IOUs, municipally or cooperatively owned utilities, power generators, and power marketers; two representatives from both consumer advocates and "environmental and other stakeholder groups, and one competitive transmission developer."²⁷⁵ SPP's highest-level committee includes a similar mix of representatives, although state regulators do not have any seats and IOUs hold the largest voting share.²⁷⁶ The SPP bylaws create only two membership sectors: transmission owners and everyone else, and several committees are divided accordingly.²⁷⁷ Formal action requires that transmission owners and transmission users each vote separately, and that the average of the two votes exceeds 66 percent.²⁷⁸ This structure provides transmission owners with disproportionate influence compared to other types of market participants.

In the next section, I explain how RTO rulemaking processes favor entrenched interests. As Michael Dworkin and Rachel Goldwasser put it in their seminal piece on RTO governance, RTOs were "established via a complex dance between transmission owners, market participants, states, and the FERC."²⁷⁹ But the IOUs that filed RTO proposals at FERC had the upper hand. After FERC rejected IOUs' proposals to explicitly control governance,²⁸⁰ IOUs pushed through governance schemes that allowed them to retain substantial influence through member and stakeholder committees that hold formal and informal power. These processes, which are based around stagnant sectors, entrench interests that had a seat at the table in the 1990s.

B. How Entrenched Power Players Win Friends and Influence RTO Boards

Filing a tariff amendment at FERC is the culmination of many RTO rulemaking processes. Each RTO's governance rules determine how amendments

272. NEPOOL Participants Committee Bylaws, *supra* note 265, § 3.1 (establishing the following sectors: Generation, Transmission, Supplier, Alternative Resources, Publicly Owned Entity, and End User).

273. *ISO-NE, et al.*, 106 FERC ¶ 61,280 at P 54 (2004).

274. See ISO-NE Participants Agreement, *supra* note 265, § 1.1 (various definitions that include the phrase "Voting Share"); NEPOOL Participants Committee Bylaws, *supra* note 265, at § 5.10.

275. MISO Transmission Owners Agreement, *supra* note 267, article II, § VI.A.

276. SPP Bylaws, *supra* note 266, § 5.1.1.

277. SPP Bylaws, *supra* note 266, § 3.9.1 ("Upon joining, Members shall be assigned to one of two Membership sectors for the sole purpose of voting on matters before the Markets and Operations Policy Committee or the Membership: Transmission Owning Members, or Transmission Using Members."). Other sections provide transmission owning members with seats on various committees.; *id.*, § 6.6 (specifying members of the governance committee); *id.* at §§ 3.9.1, 6.2, 6.3, 6.5.

278. *Id.* at § 3.9.1

279. Michael H. Dworkin and Rachel Aslin Goldwasser, *Ensuring Consideration of the Public Interest in the Governance and Accountability of Regional Transmission Organizations*, 28 ENERGY L. J. 543, 558 (2007).

280. *Supra* notes 138–139.

are developed. The key players include RTO boards and staff, RTO-member market participants, and stakeholders who do not transact in RTO markets, such as state regulators. Consumer advocates and NGOs may be members or non-member stakeholders, depending on the RTO. Regardless, they are vastly outnumbered and overpowered by asset owners in decisionmaking processes that favor well-resourced and experienced interests.

Formal roles of RTO boards, staff, members, and non-member stakeholders are delineated in FERC-jurisdictional tariffs and detailed in staff-written business practice manuals.²⁸¹ Tariffs create member or stakeholder committees that use sector-weighted voting to either advise RTO boards of member positions or, under certain circumstances in PJM and ISO-NE, initiate FERC filings. In MISO and SPP, committee voters are sector delegates.²⁸² In PJM and ISO-NE, every member company has one vote, and the votes are tallied and weighted by sector.²⁸³

RTO members organize themselves into standing committees that focus on particular technical topics. High-level and technical committees are typically self-governing with the authority to set their own rules on voting and other matters that affect decisionmaking.²⁸⁴ Technical committees, however, may be subject to oversight by a high-level committee whose directives can supersede a technical committee's rules. Participation in technical committees varies by RTO. For instance, non-member stakeholders in SPP may participate in discussions but may not vote on whether to advance a proposed rule to a high-level committee.²⁸⁵

The diagram below captures which entities have filing authority, influence, and control in RTO decisionmaking structures and processes. The block arrows show that each individual IOU, an IOU committee, and the RTO board have filing authority. High-level member committees in PJM and ISO-NE also have filing

281. See, e.g., ISO-NE Participants Agreement, *supra* note 265, § 11; PJM Operating Agreement, *supra* note 245, § 8; MISO Transmission Owners Agreement, *supra* note 267, article II, § VI; SPP Bylaws, *supra* note 266, §§ 3.0–7.6. Each RTO also has a business practice manual on governance.

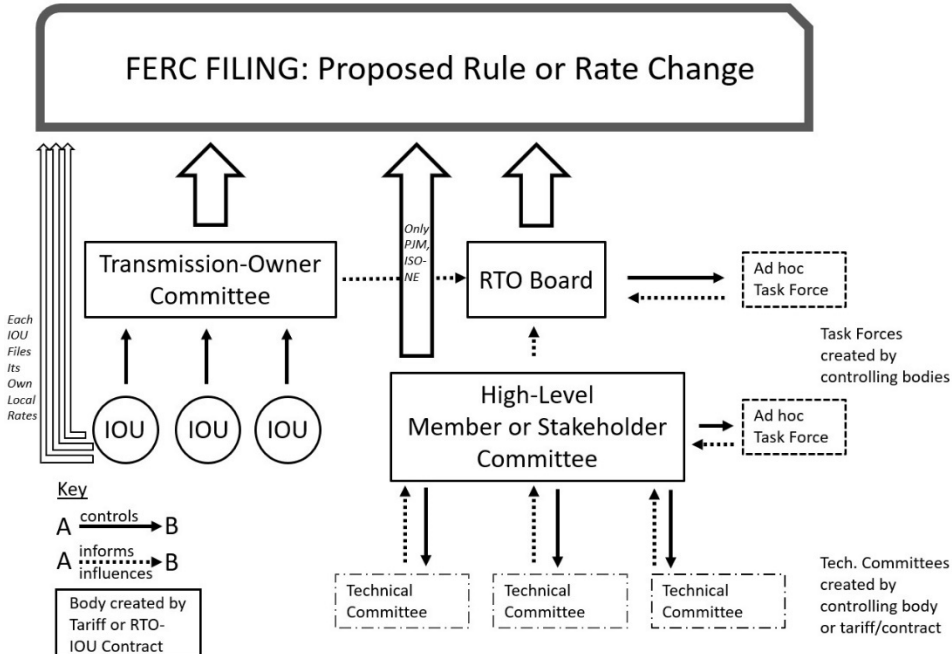
282. MISO Transmission Owners Agreement, *supra* note 267, article II, § VI.A (creating the Advisory Committee and empowering it to be a “forum” for MISO members “to be apprised of MISO’s activities and to provide information and advice to the Board”); SPP Bylaws, *supra* note 266, § 5.1 (empowering the Members Committee to “work with the Board of Directors to manage and direct the general business of SPP”); *id.* § 5.1.1 (establishing the composition of the Members Committee).

283. PJM Operating Agreement, *supra* note 245, § 8.1 (establishing the composition and structure of the Members Committee); *id.* at § 8.8 (outlining the powers of the Members Committee); NEPOOL Participants Committee Bylaws, *supra* note 265, § 3.3 (establishing that each Participant may designate a voting member to the Participants Committee); *id.* at § 5.6 (outlining the roles of the Participants Committee).

284. See e.g., *PJM Interconnection*, 104 FERC ¶ 61,328 at P 7 (2003); PJM Filing, FERC Docket No. ER03-1145, at 7 (Jul. 31, 2003) (noting that the proposal allows the Members Committee to develop bylaws for all standing committees and other bodies, such as working groups); By-Laws of PJM Interconnection, § 4.3 (2023), <https://perma.cc/55HH-MJS8>; PJM Operating Agreement, *supra* note 245, § 8.3.1; ISO-NE Participants Agreement, *supra* note 265, at § 8.1.3. SPP’s bylaws create seven committees that report to the board. The bylaws specify the sector membership of each committee and empower the board to set the scope of each committee’s activities. One of these committees is specifically required to recommend policies to the board through lower-level committees called Organizational Groups. Some of these entities also report directly to the board. SPP Bylaws, *supra* note 266, §§ 3.3.2, 6.0–6.6.

285. SPP Bylaws, *supra* note 266, § 7.0 (“Any regulatory agency having utility rates or services jurisdiction over a member may participate fully in all SPP activities, including participation at the SPP Board of Directors meetings. These representatives shall have all the same rights as Members except the right to vote. Participation includes the designation of representatives by each of the regulatory jurisdictions to participate in any type of committee, working group, task force, and Board of Directors meetings.”).

authority. Because each RTO has unique structures and processes, the diagram cannot capture every variation but instead represents common elements. The diagram does not include staff who perform key functions and are influential in decisionmaking processes.



This structure initially allowed IOUs to sidestep FERC's independence principle. To satisfy FERC's independence principle, PJM's rules restrict IOU votes in a high-level committee to just one of the five member sectors. Because IOUs vote in the transmission owner sector, their collective vote share is capped at twenty percent. But technical committees do not have such limits. Votes are not sector-weighted, and each of a member's corporate affiliates has its own vote. Holding companies with multiple affiliates, such as IOUs and certain generation owners, therefore have more votes than an unaffiliated new entrant and more opportunities to influence outcomes.²⁸⁶ When IOUs proposed this governance structure in the mid-1990s, they were invested heavily in generation and owned companies that participated in four of the five PJM sectors. While FERC prevented IOUs and generation owners from dominating the high-level committee, FERC allowed them to have substantial sway in technical committees that perform much of the work in developing new regional rules.

There are numerous pathways for members or stakeholders to initiate an investigation or rulemaking process about a particular market or transmission rule. In PJM, members or stakeholders may raise an issue at a technical committee, which may then vote to consider the issue and may form a "subcommittee" or

286. See PJM Manual 34: PJM Stakeholder Process, § 8.3 (Jan. 25, 2023), <https://perma.cc/H3V2-PBMV> [Hereinafter PJM Stakeholder Manual] (describing voting procedures at lower-level committees).

“task force” to investigate and develop potential solutions.²⁸⁷ Proposals approved by a simple majority vote at a technical committee are elevated to a high-level committee whose vote on the matter advises the RTO board of members’ positions or compels PJM to file the changes at FERC.²⁸⁸ Under this pathway, most of the detailed work involved in amending regional power sector rules happens in member-created task forces or technical committees that may be facilitated by PJM staff.²⁸⁹ While the mechanics vary, ISO-NE, MISO, and SPP also develop and vet proposals through technical committees.²⁹⁰ In general, at least a majority and as high as two-thirds approval based on sector-weighted voting at a high-level committee puts a proposal before the RTO board for its consideration.²⁹¹

RTO boards can also initiate rule development processes. For instance, the SPP board created a 15-member task force in 2018 to recommend changes to SPP’s operations and planning. After a year-long effort, the task force of stakeholders and two board members finalized twenty-one recommendations that were ultimately approved by SPP’s board.²⁹² SPP modeled the initiative after a similar task force initiated a decade earlier that ultimately led to FERC-approved changes to transmission planning and cost allocation.²⁹³ In PJM, the board has specified authority under the staff-written manual on governance to convene stakeholder processes that address “difficult issues” or “contentious issues with known . . . implementation deadlines.”²⁹⁴

These stakeholder processes can advantage incumbent interests in several ways. First, companies with multiple corporate affiliates have multiple votes in lower-level committees. In PJM, affiliate voting has historically allowed the two supply-side sectors to control nearly 90 percent of lower-level votes.²⁹⁵ Second, well-resourced companies have the means to participate in committee processes.²⁹⁶ RTO stakeholders, and in particular consumer interests, have repeatedly complained that meaningfully participating in RTO processes is too expensive and that incumbent corporate interests therefore tend to dominate.²⁹⁷

287. *Id.* at §§ 6.3–6.7.

288. *Id.* at § 8.3.

289. *Id.* at § 7 (explaining how task forces and subcommittees function); *id.* at § 6.7 (noting that PJM staff assign a chair/facilitator for the task force or subcommittee and may also assign PJM technical staff); *id.* at § 7.4 (explaining the roles of the PJM-appointed chair/facilitator and noting that PJM may offer its own proposal).

290. Christopher A. Parent et al., Exeter Associates, *Governance Structure and Practices in the FERC-Jurisdictional ISOs/RTOs* (2021), <https://perma.cc/7B7A-GMUL>. In ISO-NE, passage at a lower-level committee requires a two-thirds vote. ISO-NE Participants Agreement, *supra* note 265, at § 8.3.7.

291. *See* Parent et al., *supra* note 290.

292. Southwest Power Pool, 2019 Annual Report, at 8 (2020), <https://perma.cc/Y5Z9-ETW7>.

293. Southwest Power Pool, Holistic Integrated Tariff Team Report (Jul. 23, 2019), <https://perma.cc/TCT6-7TQY>.

294. PJM Stakeholder Manual, *supra* note 286, § 8.6.3 (detailing the Enhanced Liaison Committee); *id.* at § 8.6.4 (detailing the Critical Issue Fast Path).

295. Simeone on Reforming Governance Principles, *supra* note 236, 3–4.

296. Simeone on PJM Governance, *supra* note 246, at 39; Dworkin & Goldwasser, *supra* note 279, at 584 (“Thus, large companies that have a great deal at stake in the market can overwhelm the process because they can invest so much more in the stakeholder processes.”).

297. *See, e.g.*, Pre-Technical Conference statements in FERC Docket No. ER09-1048, Jan.–Feb. 2010, filed by Jed M. Nosal, Massachusetts Attorney General’s Office; John Anderson, ELCON; Patrick McCullar, Delaware Municipal Electric Corporation (on behalf of American Public Power Association). *See also* Lenhart

FERC has recognized the validity of these concerns.²⁹⁸ Third, incumbents may have expertise, relationships, and influence that they have accumulated over 25 years of participation in these processes.²⁹⁹ A new entrant cannot easily acquire this experience.

On economically significant issues, RTO rule development can play out like a legislative process. Members and stakeholders discuss problems and offer potential solutions in formal meetings while also lobbying each other behind-the-scenes. Members may form coalitions, negotiate backroom deals, and reach compromises. Indeed, Walters and Kleit call RTOs “corporatist democracies.”³⁰⁰ Under corporatism, the state delegates policy development to non-state actors who are organized into functionally differentiated categories.³⁰¹ In PJM, Walters and Kleit find that corporatism “exalts certain participants’ roles and systemically excludes the full participation of other constituencies, including consumer, environmental, and state interests.”³⁰²

This framing of RTO governance obscures the roles of the RTO itself. These elaborate legislative-style processes are usually just advisory, with exceptions noted later.³⁰³ RTO boards make the final decisions about FERC filings, and RTO

& Fox on Structural Power, *supra* note 6, at 14 (“Stakeholders in each of the studied RTOs describe how some stakeholders are more constrained than others by the time and expertise required to be an influential participant.”).

298. See, e.g., *ISO-NE*, 133 FERC ¶ 61,070 at P 67 (2010).

299. Mark James et al., *Policy Study No. 112: How the RTO Stakeholder Process Affects Market Efficiency*, R STREET INSTITUTE, at 15 (2017), <https://perma.cc/QKP2-EB7B> (“Continual participation in RTO governance has created an opportunity for incumbents to develop and benefit from relationships with RTO staff. This adds to the resource and knowledge advantages and is further exacerbated by the voluntary nature of RTOs, as incumbent transmission owners can threaten to leave.”); Benjamin A. Stafford & Elizabeth J. Wilson, *Winds of Change in Energy Systems: Policy Implementation, Technology Deployment, and Regional Transmission Organization*, 21 ENERGY RSCH. & SOC. SCI. 222, 230 (2016) (“Within RTOs, much knowledge is tacit and challenging for new stakeholders to navigate . . . distinct cultures and sub-cultures must be understood in order to gain influence in policy development processes”). Marc Galanter’s seminal essay on repeat players and one-shotters in the legal system does not precisely map onto RTO stakeholder processes, but it offers several relevant insights. Galanter hypothesizes that parties that are frequent litigants that are often defending or pursuing similar claims enjoy numerous advantages over their opponents and may “play the litigation game differently.” For instance, the repeat litigant may “adopt strategies calculated to maximize gain over a long series of cases” and may “trade off symbolic defeats for tangible gains.” Repeat litigants may benefit from an overloaded legal system, which causes delays, raises costs, and discourages litigation, all of which can keep the status quo in effect. Marc Galanter, *Why the ‘Haves’ Come Out Ahead: Speculations on the Limits of Legal Change*, 9 LAW & SOC. REV. 95 (Autumn 1974).

300. Walters and Kleit, *supra* note 136, at 1053; see also Shelley Welton, *supra* note 7, at 213 (referring to RTOs as “private membership clubs in which incumbent industry members make the rules for electricity markets and the electricity grid through private mini-democracies — with voting privileges reserved for RTO members”).

301. Walters and Kleit, *supra* note 136, at 1053.

302. *Id.* at 1067.

303. ISO-NE Participants Agreement, *supra* note 265, § 8.5 (“Except as expressly agreed by NEPOOL and ISO, each of the Principal Committees . . . shall serve only in an advisory role, and shall have no decisional authority with respect to ISO.”); *id.* at § 11 (providing that the ISO shall “shall consult with and receive feedback” from stakeholders prior to changing market rules); MISO Transmission Owners Agreement, *supra* note 267, at article II, § VI.A (“The Advisory Committee shall be a forum for its members to be apprised of MISO’s activities and to provide information and advice to the Board . . . but neither the Advisory Committee nor any of its constituent groups shall exercise control over the Board or MISO.”); SPP Bylaws, *supra* note 266, § 3.1 (“Member input on decision-making shall be accomplished primarily through Membership participation in Organizational Groups.”) (emphasis added); Lenhart & Fox on Structural Power, *supra* note 6, at 11 (stating that

staff's prominent duties provide it with substantial influence in regional governance.³⁰⁴ Several recent proceedings suggest that staff influence in rule development processes may be particularly strong when members are unable to achieve a supermajority and therefore cannot elevate a proposal to the board.³⁰⁵

RTO staff are entrenched players in rule development processes. In ISO-NE and SPP, RTO staff routinely develop rule changes that are then vetted through stakeholder processes.³⁰⁶ Elsewhere, staff participate in stakeholder committees, propose their own solutions in rule development processes, and advise the board on stakeholder-approved proposals.³⁰⁷ Staff may also write white papers about contested issues, which may influence deliberations. RTO staff have other formal duties, including revising business practice manuals that implement tariffed processes³⁰⁸ and developing regional transmission expansion plans.³⁰⁹

Ultimately, however, RTO boards are typically the final decisionmakers and hold filing authority over a broad range of market and transmission rules. The Board's control over the organization's complex operations is markedly different from a typical corporate board. In general, corporate boards supervise senior management and are not deeply involved in operational decisions. Although a

stakeholders' votes "are seen by many stakeholders as simply signaling stakeholder positions for ISO-NE" and that "several stakeholders stated that the process of translating votes into specific market rules lacks transparency and is not constrained by stakeholder votes").

304. Stafford & Wilson, *supra* note 299, at 228–230 (focusing on MISO and finding that staff has "significant influence" over stakeholder processes and "play a crucial role in facilitating engagement").

305. Lenhart & Fox on Structural Power, *supra* note 6, at 10 (noting that SPP stakeholders "expressed concern that market changes and a greater diversity of interests are making it more difficult to reach consensus" and that "these changes are perceived to be contributing to a larger role for staff"); Kavulla, *supra* note 99, at 9 (summarizing that when PJM members could not agree about an energy market design issue, the Board sent a letter saying it would file a complaint at FERC about the existing rules, since the members hold filing rights. Around the same time, PJM staff issued a whitepaper that supported the board's position.). Similarly, in in response to a FERC order determining that PJM's capacity market rules were unjust and unreasonable, PJM's board filed proposed rules that were rejected by the high-level members' committee (PJM Capacity Construct/Public Policy Senior Task Force Final Report (Dec. 13, 2018), <https://perma.cc/RNE4-V3UY>) and over "an outpouring of stakeholder opposition." Protest of Clean Energy Advocates, Docket No. ER18-1314, at 29 (May 7, 2018). MISO's capacity construct was also controversial among stakeholders. See Protest of the Mississippi Public Service Commission and the Mississippi Public Utilities Staff, Docket No. ER22-495, at 8–28 (summarizing stakeholder protests of MISO's FERC filing and concluding that MISO filed its proposal "despite four almost unanimous motions clearly communicating to MISO the stakeholders' distrust and overwhelming and unaddressed concerns with MISO's proposal").

306. Lenhart & Fox on Participatory Democracy, *supra* note 235, at 13, app. A.

307. *Id.* PJM distinguishes between staff's facilitate and advocacy roles. PJM Stakeholder Manual, *supra* note 286, § 4.2 ("In order to help ensure fair, inclusive, and non-partisan forums for member and other participants' discussion, PJM shall separate its facilitation function and role from its advocacy role in all Forums, Task Forces, Subcommittees, Special Teams, and Standing Committees.").

308. PJM Operating Agreement, *supra* note 245, § 10.4; MISO Open Access Transmission Tariff, § 1.A ISO New England Open Access Transmission Tariff, § 1.2.2.

309. See, e.g., MISO Transmission Owners Agreement, *supra* note 267, appendix B, § II ("The planning function of MISO shall be the responsibility of the MISO Planning Staff."); *id.* at § VI ("The Planning Staff shall present the MISO Plan . . . to the Board for approval on a biennial basis . . ."); PJM Operating Agreement, *supra* note 245, § 10.4(xviii)(C); *id.* at schedule 6, § 1.5.6(f). In PJM, staff chair one of the two high-level committees. The Markets and Reliability Committee is the only "Senior Standing Committee" created by the PJM Operating Agreement. See PJM Operating Agreement, *supra* note 245, § 8.6. Based on the committee's meeting minutes, a staff member has chaired the committee since at least 2010.

board is “ultimately responsible for governing a corporation,”³¹⁰ “the myriad tasks facing such organizations are too burdensome to be carried out by a board of directors alone.”³¹¹ Thus the “the modern board’s involvement in management of the firm is typically limited to hiring and firing the top management team, approving major transactions, and, perhaps, helping set the broad strategic vision for the firm.”³¹²

RTO boards, on the other hand, routinely consider whether and how to tweak highly technical market structures, exercising decisionmaking power that reaches far deeper into the organization’s operations than a typical corporate board. RTO board members do not have staff or the capacity to master each technical rule change on their agenda. It seems likely — and entirely appropriate — that boards rely on RTO staff for information and analysis.³¹³ A CEO’s presence on the board provides staff with a prominent role in board deliberations.³¹⁴ In addition, senior RTO staff present at board meetings on a range of topics.³¹⁵ In PJM, RTO staff have an exclusive audience with the board, as the meetings are closed to PJM members, state regulators, and other stakeholders.

The “conventional wisdom” about corporate boards has been that they are “captured by senior management.”³¹⁶ In RTOs, staff’s technical competence

310. Geoffrey Parsons Miller, *THE LAW OF GOVERNANCE, RISK MANAGEMENT, AND COMPLIANCE* 27 (2014) (quoting Del. Code. Ann. tit. 8 § 141(a) (“The business and affairs of every corporation organized under this chapter shall be managed by or under the direction of a board of directors . . .”)); Kenneth B. Davis, *The Director’s Duty of Oversight — Pre-Enron; Post-Enron*, University of Wisconsin Law School Faculty Scholarship Collection (2002), <https://perma.cc/57NT-DE8B> (tracing how corporate law formally shifted the board’s role from managing the corporation to monitoring management); Dorothy S. Lund & Elizabeth Pollman, *The Corporate Governance Machine*, 121 COLUM. L. REV. 2563 (2021) (providing a “novel descriptive account of the system of corporate governance that has reigned in the United States over the past half century” that sees the primary role of boards as “ensur[ing] that they are able and motivated to effectively supervise management’s performance for the benefit of all shareholders” (quoting Institutional Shareholder Services, *United States Proxy Voting Guidelines Benchmark Policy Recommendations* 8 (2019)); Stephen M. Bainbridge & M. Todd Henderson, *Boards-R-Us: Reconceptualizing Corporate Boards*, 66 STANFORD L. REV. 1051, 1061 (May 2014) (“[T]he board’s principal function [] is monitoring management.”); *id.* at 1062 (“The role of the typical public corporation board shifted from a mainly advisory function in the 1970s to an emphasis by the late 1990s on active and independent monitoring of the top management team.”).

311. Miller, *supra* note 310, at 28.

312. Bainbridge & Henderson, *supra* note 310, at 1061; Stephen M. Bainbridge, *Why a Board? Group Decisionmaking in Corporate Governance*, 55 VAND. L. REV. 1, 5 (2002) (understanding the Model Business Corporation Act as “intend[ing] to make clear that the board’s role is to formulate broad policy and oversee the subordinates who actually conduct the business day-to-day”).

313. Lenhart & Fox on Structural Power, *supra* note 6, at 14 (“RTO boards, in conjunction with management and staff, influence market design through strategic guidance, priority setting, and management of the pace of decision-making.”). RTO boards may also influence staff priorities. Lenhart & Fox on Participatory Democracy, *supra* note 235, at 11 (“[P]erhaps the most important role for boards is providing strategic direction and oversight to staff who are critical in agenda setting, sharing information, and creating new venues for discussion”).

314. Lenhart & Fox on Participatory Democracy, *supra* note 235, at 12, appendix A (noting that with the exception of CAISO, each RTO CEO sits on the board, although they are non-voting members in ISO-NE, MISO, and PJM).

315. This assertion is based on my review of minutes of numerous PJM, MISO, and SPP board meeting meetings. ISO-NE does not post board meeting minutes. Their publicly available agendas reveal very little.

316. Bainbridge, *supra* note 312, at 8 (2002). *But see* Paul MacAvoy & Ira M. Millstein, *The Active Board of Directors and Its Effect on the Performance of the Large Publicly Traded Corporations*, 11.4 J. OF APPLIED CORP. FIN. 1283, 1285 (Winter 1999) (discussing “the evolution of boards from managerial rubber-stamps to active and independent monitors”).

ought to inform the organization's decisionmaking. Independent decisionmaking requires robust input from RTO staff. But FERC's rules also demand that RTO governance "include fair representation of all types of users"³¹⁷ and that RTO boards are "fully aware" of market participants' positions.³¹⁸ An independent RTO board must consider the commercial implications of its decisions while also ensuring that RTO "members do not exercise undue influence."³¹⁹ The committee-based deliberative processes described above inform boards of members' positions. Additional formal mechanisms connect boards with members and stakeholders. In general, these mechanisms provide another means for entrenched players to influence RTO decisions.³²⁰

For instance, delegates from each of PJM's member sectors meets privately with the PJM board prior to each regularly scheduled board meeting, which provides members with opportunities to weigh in on the board's agenda and influences its decisions.³²¹ In addition, starting in 2020, each PJM member sector meets privately once a year with the PJM CEO and three PJM board members.³²² In SPP, the high-level Members Committee meets concurrently with the board and conducts an advisory vote before the board rules on a proposal.³²³ Travis Kavulla observes that because this same committee also elects the board "as a practical matter the members of SPP rule the RTO — even if the SPP board may, as a matter of legal theory, overrule them."³²⁴ As Kavulla notes, SPP board members may be renominated by a member committee and then reelected by the RTO's high-level committee, creating a dynamic that might make board members seeking renomination beholden to market participants.³²⁵

317. Order No. 888, *supra* note 84, at 21,596.

318. Order No. 719, *supra* note 10, at P 510.

319. *PJM Interconnection*, 132 FERC ¶ 61,173 (2010) (from page 8 of the attached staff report) ("The Board does not exist to serve members' interests and in fact must see that members do not exercise undue influence over PJM's control area.").

320. Lenhart & Fox on Participatory Democracy, *supra* note 235, at 2 (noting a "natural tension" between the goals of independence and responsiveness) (citing Dworkin & Goldwasser, *supra* note 279)

321. PJM Interconnection, Compliance Filing, Docket No. ER09-1063, Apr. 29, 2009, pg. 56 (stating in response to Order No. 719 that the Liaison Committee is the "primary board advisory committee"); *id.* at pg. 52 (stating that the Liaison Committee "assists in satisfying" all four of the responsiveness criteria outlined in Order No. 719); *see also* Answer of PJM Interconnection, Docket No. EL23-50, Apr. 17, 2023, at 2–6 (explaining the purpose and history of the Liaison Committee). In 2023, the West Virginia Public Service Commission and PJM's market monitor, an outside consultant that contracts with PJM to review market performance and recommend reforms, filed separate complaints at FERC that argue PJM must open these private meetings between the board and the Liaison Committee. *See* FERC Dockets EL23-45 and EL23-50.

322. PJM Interconnection, Board Disclosures, <https://perma.cc/53RL-QLUX>. The market monitor and state utility regulators have their own separate opportunities to meet privately with the board, although state regulators have recently met only once per year with the board. *See PJM Interconnection*, 144 FERC ¶ 61,238 at P 9 (2013) (noting that the PJM board meets regularly with the internal market monitor, and board members may contact the market monitor at any time); PJM, Organization of PJM States (OPSI) Factsheet, <https://perma.cc/8Z5E-GNVP> (noting that the board and state regulators meet "at least once a year").

323. Lenhart & Fox on Participatory Democracy, *supra* note 235, at 9; SPP Bylaws, *supra* note 266, §§ 5.1.1, 5.1.5.

324. Kavulla, *supra* note 99, at 8; Lenhart & Fox on Structural Power, *supra* note 6, at 9 (finding that "SPP is often referred to as an RTO that listens to its members").

325. SPP Bylaws, *supra* note 266, at §§ 4.3, 6.7. Indeed, two current board members (as of May 2023), Larry Altenbaumer and Joshua W. Martin III, have been on the SPP Board for approximately two decades.

PJM has a similar arrangement for selecting board members. A committee with one delegate from each member sector nominates potential board members. The high-level member committee votes on nominees.³²⁶ Elsewhere, board selection duties are shared by the current board and members or stakeholders.³²⁷ By tying board members to the stagnant RTO sectors, these approaches to board nominations can reinforce incumbent dominance.

RTO tariffs can also bias individual board member selections in favor of incumbent firms. Tariffs specify professional qualifications for board members, including “corporate leadership,” expertise in finance, accounting, and risk management, as well as experience in the power industry.³²⁸ These requirements tilt board selection processes towards former IOU executives and other top management at for-profit companies. Of the 36 current board members of the four multi-state RTOs, thirteen are former IOU executives.³²⁹ Many of these RTO board members had multi-decade careers at IOUs. They are deeply enmeshed in the industry’s culture and share similar assumptions, lessons, and values that shape their views of the industry.³³⁰ These long-time IOU executives have professional networks of top IOU management from across the industry. It seems plausible that these board members are sympathetic to IOUs’ positions.

Another nineteen RTO board members are current or former private sector executives across a range of other industries, such as insurance, finance, and consumer products. In their day-to-day jobs, these corporate executives are accountable to their corporation’s officers and board. As RTO board members, they must consider wider interests.³³¹ RTO mission or vision statements focus on system efficiency and reliability,³³² but the RTO’s foundational purpose is to

326. PJM Operating Agreement, *supra* note 245, § 7.1.

327. In MISO, the board selects three board members to form a nominating committee along with two stakeholders or members that are also delegates on the high-level committee. All MISO members may vote on the nominees. MISO Transmission Owners Agreement, *supra* note 267, article II, § III.A.1. *See also* MISO, Principles of Corporate Governance (2023), <https://perma.cc/5ZZ4-EBSH>; MISO, Formal Notice to MISO Members Re: Election of Three Director Candidates to Serve on MISO’s Board, at n. 1 (Sep. 21, 2021), <https://perma.cc/CB2M-23VJ> (noting members of the Nominating Committee). ISO-NE’s nominating committee includes seven current board members, one representative from each of the six member sectors, and one state regulator. To become a board member, a nominee must be approved by the ISO-NE board and 70% of the high-level stakeholder committee. ISO-NE Participants Agreement, *supra* note 265, § 13.

328. PJM Operating Agreement, *supra* note 245, § 7.2; ISO-NE Participants Agreement, *supra* note 265, § 9.2.2; SPP Bylaws, *supra* note 266, § 4.2.2; MISO Transmission Owners Agreement, *supra* note 267, article II, § III.A.1.

329. I reviewed board members’ bios on RTO websites and did additional research through LinkedIn and Google searches. I am not including RTO CEOs who sit on RTO boards.

330. RICHARD F. HIRSH, TECHNOLOGY AND TRANSFORMATION IN THE AMERICAN ELECTRIC UTILITY INDUSTRY 26 (1989) (outlining the relevance of industry culture).

331. That said, the boards do include four former utility regulators (three state regulators and one FERC chair) and one utility consumer advocate (also a former executive at a generation owner).

332. PJM INTERCONNECTION, About PJM, <https://perma.cc/V6LD-JJVY> (“Vision: To be the electric industry leader — today and tomorrow — in reliable operations, efficient wholesale markets, and infrastructure planning.”); ISO-NE, Our Mission, Vision, and Values, <https://perma.cc/M6MH-GLY5> (“Our Vision: To harness the power of competition and advanced technologies to reliably plan and operate the grid as the region transitions to clean energy.”); MISO, About MISO, <https://perma.cc/UYU4-4ZTF> (“Our mission is to work collaboratively and transparently with our stakeholders to enable the reliable delivery of low-cost energy through efficient, innovative operations and planning.”); SPP, About Us, <https://perma.cc/382L-4CC3> (“The SPP mission: Working together to responsibly and economically keep the lights on today and in the future.”).

replace IOU-provided transmission service with non-discriminatory regional operations and planning. This core function ought to put RTOs at odds with their IOU members, which are led by executive and boards who are fully committed to maximizing shareholder returns.³³³ RTOs, on the other hand, are led by part-time board members whose primary professional responsibilities may lie elsewhere and must balance several goals as RTO board members. Expecting RTO boards to be a counterweight to IOU control may be implausible.

These constraints on individual RTO board members are compounded by the limitations on RTO boards' legal authority. Tariffs and other documents create shared governance arrangements. As I detail in the next section, IOUs hold independent filing rights over a range of important regional issues. In addition, market participants in PJM and ISO-NE and state regulators in MISO and SPP also have filing authority. In PJM, a high-level member committee has exclusive authority to file changes to the Operating Agreement, providing it with control over certain governance structures, energy market rules, regional transmission expansion planning, and other matters.³³⁴ When the PJM board disagrees with its members about rules in the Operating Agreement, the board can file a complaint at FERC.³³⁵ In ISO-NE, when the board and the members disagree on a particular tariff change, ISO-NE must file both the board's preferred approach and a proposal approved by 60% of the high-level member committee.³³⁶

State regulators in MISO and SPP also have limited filing authority. When FERC approved SPP's RTO proposal, it found that a "partnership" between the FERC and state commissions would benefit RTO members.³³⁷ SPP's FERC-approved bylaws provide a Regional State Committee (RSC) with "primary responsibility" for proposing changes to regional transmission cost allocation and three other issues.³³⁸ The bylaws specify that SPP must file amendments approved by the RSC and that SPP itself has independent filing authority over the same issues.³³⁹ The RSC's own bylaws, which are not subject to FERC review, determine how the RSC makes decisions.

MISO state regulators also have non-exclusive authority over regional cost allocation but not over any other issue. Initially, the Organization of MISO States (OMS) merely "played a significant advisory role" in MISO governance.³⁴⁰ FERC later approved formal authority in a 2013 proceeding about MISO's expansion to include an IOU with service territories across four southeastern states.³⁴¹ MISO

333. See, e.g., Kovvali & Macey, *supra* note 50 (documenting various ways that utilities enrich shareholders by over-charging or otherwise exploiting ratepayers); ENERGY AND POLICY INSTITUTE, *Pollution Payday: Analysis of Executive Compensation and Incentives of the Largest U.S. Investor-Owned Utilities* (Sep. 2020), <https://perma.cc/X6YS-GBVV> (cataloging executive compensation policies and showing that compensation is mostly tied to financial performance).

334. PJM Operating Agreement, *supra* note 245, § 8.8.

335. See, e.g., *PJM Interconnection*, 171 FERC ¶ 61,153 at PP 6–10 (2020) (summarizing PJM's filing).

336. ISO-NE Participants Agreement, *supra* note 265, § 11.1.5.

337. *SPP*, 106 FERC ¶ 61,110 at P 218 (2004).

338. *SPP* Bylaws, *supra* note 266, § 7.2. The RSC has used this authority on numerous occasions. See Justin A. Hinton, *The History of the Regional State Committee for the Southwest Power Pool, Inc.*, SOUTHWEST POWER POOL (Apr. 2022), <https://perma.cc/F9WR-3PXK>.

339. *Id.*

340. *SPP*, 106 FERC ¶ 61,110 (2004) (Comm'r Kelliher, concurring).

341. *MISO and MISO Transmission Owners*, 143 FERC ¶ 61,165 (2013).

and its transmission owners agreed to allow OMS to compel MISO to file changes to regional cost allocation when: 1) at least two-thirds of OMS members support the proposal, and 2) MISO itself is already filing its own proposed changes to regional cost allocation.³⁴² OMS can also initiate a stakeholder process to develop cost allocation proposals.³⁴³ OMS enjoys the largest vote share of any sector (16%) in MISO's high-level committee whose votes advise the board.³⁴⁴

Finally, RTO staff are ultimately responsible for implementing FERC-approved rules. Staff-written business practice manuals that are not subject to FERC review expand on the tariff. Staff retains discretion in how they implement the rules and manuals. Travis Kavulla elaborates that “there are many practical examples where the day-to-day technical work of RTOs may go in different directions depending on whether ‘economic efficiency’ or ‘service to business members’ is the lodestar.”³⁴⁵ For instance, PJM staff propose the total amount of capacity the RTO procures in an annual auction worth \$7 to \$10 billion per year.³⁴⁶ In general, a larger procurement leads to more revenues for generators and higher consumer costs. While the tariff allows PJM members to protest staff's procurement proposal through an internal process, and grants the board the ultimate decision, staff's initial number anchors the process.

In energy markets, generator dispatch and prices can also be affected by staff's decisions.³⁴⁷ Transmission expansion planning rests entirely on assumptions and models that are run by staff.³⁴⁸ RTO members and stakeholders have opportunities to provide input,³⁴⁹ and transmission owners have special roles in those processes.³⁵⁰ FERC does not oversee implementation of the planning procedures, and it does not require RTOs (or non-RTO IOUs) to file their regional

342. *Id.* at PP 4–6 (outlining the states' committee's authority).

343. *Id.*

344. Parent et al., *supra* note 290, at 4-7.

345. Kavulla, *supra* note 99, at 6.

346. *Id.*; PJM, Open Access Transmission Tariff, Attachment DD: Reliability Pricing Model, § 5.10. The capacity auction was worth \$7 billion in 2022 and \$9.5 billion in 2021. PJM Financial Report, *supra* note 1, at 7.

347. *See, e.g.*, Monitoring Analytics, *supra* note 54, at 129, 187–88, 223, 227, 236, 255, 578–580, 624 (identifying where PJM staff have discretion to take actions that can affect market prices and suggesting PJM propose rules that will minimize discretion).

348. *See, e.g.* PJM, *Business Practice Manual 14B: PJM Regional Transmission Planning Process*, at 21 (Apr. 10, 2023), <https://perma.cc/3G6Z-VGBH> [Hereinafter PJM Planning Manual] (“PJM’s planning analyses are based on a consistent set of fundamental assumptions regarding load, generation and transmission built into power flow models. . . . Generation and transmission planning assumptions are embodied in the base case power flow models developed annually by PJM and derived from the Eastern Reliability Assessment Group processes and procedures pursuant to NERC standard MOD-032, as well as Transmission Owners’ assumptions . . . Each type of [regional planning] analysis . . . encompasses its own methodological assumptions as further described throughout the rest of this Manual.”).

349. *See, e.g.*, MISO, Business Practices Manual No. 020: Transmission Planning, at 41–42 (May 1, 2023) <https://perma.cc/5A5E-NV9G> [Hereinafter MISO Planning Manual] (“MISO planning staff is responsible for developing a Study Plan and arranging for stakeholder meeting(s) with [various committees] for collaborative input and refinement of the planning scope, project definition and purpose, work assignments and responsibility, scheduling, cost analysis, alternatives, and assumptions.”).

350. *See, e.g.* PJM Planning Manual, *supra* note 348, attachment B: Regional Transmission Expansion Plan: Scope and Procedure, B.3 (“PJM will exchange information and data with each Transmission Owner (TO) for the purpose of developing RTEP assumptions in preparation for the Subregional RTEP Committee assumptions meeting . . .”).

plans.³⁵¹ As discussed in the next section, IOUs have unique authority to interfere with RTO staff's planning.

C. IOUs Circumvent and Subvert Regional Governance

Transmission-owning utilities are the only market participants that hold independent filing rights over regionally significant issues. Their unique ability to make decisions without the RTO's consent or regional voting weakens the RTO and undermines its ability to administer efficient markets, plan regional transmission expansion, and implement FERC's directives. I begin this discussion by showing that IOU control over "local" planning and regional transmission cost allocation intrudes on RTO transmission planning and undercuts the RTO's ability to meet regional goals. I then discuss the effects of IOU control or influence over generator interconnections and other issues. Finally, I discuss how the IOUs' formal authority can lead to excessive informal influence.

Note that this section focuses on ISO-NE, MISO, and PJM. While some of the dynamics around transmission planning are similar in SPP, its IOU members do not have filing rights over regional issues. However, as noted above, SPP decisionmaking processes divide parties into transmission owners or users, a dichotomy that benefits IOUs.³⁵² Lenhart and Fox report that SPP "is often referred to as an RTO that listens to its members" that "seeks unity in decisions" and generally paints the RTO as favorable to incumbent interests.³⁵³ So while SPP IOUs lack the ability to subvert regional decisionmaking with unilateral filing authority, SPP has its own unique structures and culture that elevate IOUs.

The purpose of centralized regional transmission planning is to more cost-effectively achieve reliability, economic, and public policy goals than could be realized if each utility in the region built transmission for its own goals or through ad-hoc partnerships.³⁵⁴ Projects in an RTO's regional plan are financed through the RTO's tariff and paid by transmission owners who automatically pass through transmission costs to consumer bills. In general, RTOs allocate construction costs to transmission owners pursuant to methods outlined in the tariff. RTO boards approve regional plans,³⁵⁵ and RTO staff may scrutinize approved projects before and during construction to determine whether they are being developed on-budget and in-line with expectations.³⁵⁶ An RTO can cancel projects under development if the assumptions underlying the project approval prove to be incorrect.³⁵⁷ RTOs

351. See, e.g., PJM Operating Agreement, *supra* note 245, § 7.7 (empowering the PJM Board to approve the regional transmission expansion plan); Order No. 1000-A, *supra* note 217, at P 191 (noting that the rule does not require regional entities to file their plans with FERC).

352. *Supra* notes 277–278.

353. Lenhart & Fox on Structural Power, *supra* note 6, at 10.

354. Order No. 1000, *supra* note 10, at PP 80, 147–148.

355. SPP, 106 FERC ¶ 61,110 at P 188 (2004) (RTO must "independently oversee the regional transmission plan and solely determine the priority of transmission planning projects"); Order No. 2000, *supra* note 15, at pgs. 199–200 (stating RTOs must have "ultimate responsibility" over regional planning).

356. See, e.g., Comments of the Midcontinent Independent System Operator, FERC Docket No. AD22-8, at 15–19 (Mar. 23, 2023) (outlining the RTO's analysis of certain large-scale regional projects during construction).

357. *Newman v. FERC*, 27 F.4th 690, 694 (D.C. Cir. 2021) (stating that in 2007 PJM determined a regional project was needed, but PJM cancelled the project in 2012 "based on updated analyses that there was no longer a projected reliability shortfall").

run solicitations and other competitive processes to determine who builds certain regional projects.³⁵⁸ Naturally, IOUs prefer to avoid competition.³⁵⁹

Across RTOs, foundational agreements between RTOs and their IOU creators allocate filing rights and planning responsibilities. These agreements, RTO tariffs, and business practice manuals explicitly or indirectly limit the scope of an RTO's planning authority,³⁶⁰ and subordinate RTO regional planning to planning conducted by each member IOU within the footprint of its local delivery monopoly.³⁶¹ This hierarchy preferences IOUs' local projects over potential regional development.

Each IOU can itself determine whether a transmission expansion project it is proposing should be "regional" and therefore vetted through the RTO-administered planning process and approved by the RTO board. By simply including the project in its self-approved local plan, the IOU can bypass RTO processes. A recent local plan of Entergy, an IOU in the southeast and MISO member, illustrates how an IOU can limit the scope of RTO transmission planning. In 2023, Entergy proposed \$4 billion of transmission expansion projects across its footprints in Texas and Louisiana, including two 500 kV projects costing \$2.5 billion.³⁶² Such expensive high-voltage projects would ordinarily be planned by MISO according to procedures outlined in its tariff.³⁶³ By designating these 500 kV projects as "local," Entergy avoids the prospect that MISO would award the

358. *See, e.g.*, Statement of Ken Seiler, PJM Vice President of Planning, FERC Docket No. AD22-8, at 4-5 (Sep. 27, 2022) (outlining how PJM evaluates proposals submitted by developers through a solicitation process)

359. In an ongoing FERC proceeding about regional planning, the IOUs' trade association has asked FERC to end competitive development processes and restore IOUs' so-called rights of first refusal. Initial Comments of Edison Electric Institute, FERC Docket No. RM21-17 (Oct. 12, 2021). Numerous IOUs echo this request in their own comments. *See also* Utility Transmission Syndicate, *supra* note 12, at 47-57.

360. MISO Transmission Owners Agreement, *supra* note 267, article I., § I.T ("The transmission facilities of the Owners which are committed to the operation of MISO . . . include (i) all networked transmission facilities above 100 kilovolts [kV] . . ."); *Id.* at appendix B ("The planning of all Non-transferred Transmission Facilities . . . shall be done by the Owners."); ISO-NE Transmission Operating Agreement, article II, <https://perma.cc/XG6N-PUUK> [Hereinafter ISO-NE Transmission Operating Agreement] (requiring IOUs to categorize their transmission facilities); *id.* at § 3.09 ("Each PTO shall engage in planning for its Local Area Facilities in a manner that is consistent with applicable NERC/NPCC Requirements, Good Utility Practice and the ISO OATT."); *Monongahela Power Co., et al.*, 162 FERC ¶ 61,129 at P 97 (2018) ("[I]t is just and reasonable for the provisions governing the [IOUs' local] transmission planning process to be contained within the PJM [Tariff] with the Transmission Owners retaining section 205 filing rights.")

361. MISO Planning Manual, *supra* note 349, § 4.2.1 ("The regional planning process evaluates, with stakeholder input throughout the cycle, the local plans of these Transmission Owner(s), as one input into the development of the regional plan."). PJM's planning process similarly begins with IOU-planned projects as inputs. PJM expressly states that it does not evaluate projects in IOU local plans. PJM Planning Manual, *supra* note 348, at B.2; *id.* at 1.1 (stating that IOU-planned projects are part of PJM's base case). ISO-NE Transmission Operating Agreement, *supra* note 360, §§ 2.06; 3.07(a)(iii), (iv); 3.09.

362. Entergy Louisiana proposed a \$1.4 billion project that includes 60 miles of new 500 kV lines and new 230 kV lines. MTEP23 Project Information for Louisiana Utilities (Feb. 3, 2023), <https://perma.cc/8Q7E-FQ62>. Entergy Texas proposed a \$1.1 billion project that includes 150 miles of 500 kV lines. MTEP23 Project Information for Texas Utilities (Feb. 3, 2023), <https://perma.cc/BHW2-DYQT>.

363. MISO Transmission Owners Agreement, *supra* note 267, appendix B, § I ("The following transmission facilities of the Owners shall constitute the Transmission System for which MISO shall be responsible for operating and planning . . . (i) all networked transmission facilities above 100 kilovolts . . ."); *id.* at § I.T ("The transmission facilities of the Owners which are committed to the operation of MISO by this Agreement. These facilities shall include (i) all networked transmission facilities above 100 kilovolts . . .").

project to another developer through a competitive process and escapes scrutiny MISO applies to regional projects.³⁶⁴

MISO's tariff limits staff's planning role to specified project types defined by their purposes, forecasted benefits, and other factors.³⁶⁵ Entergy has no such limits on projects it may include in its local plan. By designating these lines as local, regardless of whether they might qualify as regional projects, Entergy all-but assures that they will move forward under its control (assuming states provide construction permits). Entergy also eliminates the possibility of nearby regional development. IOU-planned local projects are constraints in the regional process that can crowd out more cost-effective regional solutions.³⁶⁶ By building these two large projects itself, Entergy also protects its own local transmission monopoly from outside investment and maintains exclusive access to cost-of-service transmission rates within its footprint.

Transmission investment patterns illustrate the clash between IOU local control and RTO regional planning. As IOU-spending on local projects has increased in MISO, MISO-planned regional projects have correspondingly fallen.³⁶⁷ In PJM, the record spending on local transmission projects is in part attributable to IOUs rebuilding existing facilities.³⁶⁸ Under the PJM-IOU foundational agreement, IOUs retained the right to determine when to retire transmission facilities due to age, condition, or other factors.³⁶⁹ Because they control local development, IOUs have ongoing opportunities to unilaterally choose to retire and then reconstruct existing transmission facilities. These "wreck-and-rebuilds" are low-risk and highly profitable,³⁷⁰ in part because there is little regulatory oversight.³⁷¹

As costs of rebuilds escalated, PJM members sought to disrupt the IOUs' unfettered control over local planning by empowering PJM to plan projects that

364. See, e.g., MISO Open Access Transmission Tariff, attachment FF: Transmission Expansion Planning Protocol, § VII (outlining a triennial review MISO conducts of the costs and benefits of certain regional projects).

365. *Id.* at § II.

366. See, e.g., MISO, Waterford-Churchill 230 kV Economic Project Withdrawal (Oct. 9, 2020), <https://perma.cc/D7PJ-X3KK> (explaining that transmission development and construction of a new natural gas plant obviated a MISO-planned regional project within Entergy's territory).

367. In MISO, IOU-planned projects increased from \$1.1 billion per year from 2010–2013 to \$2.7 billion per year from 2014–2019. Complaint of Coalition of MISO Transmission Customers, et al., FERC Docket No. EL20-19, at 31–32 (Jan. 21, 2020). IOUs' self-planned projects totaled \$3.6 billion in 2020 and \$3.7 billion in 2022, according to MISO's annual regional plan. I was unable to find MISO's 2021 report. Meanwhile, regional investment was negligible starting in 2013 until MISO approved \$10.3 billion of regional projects in 2021.

368. Notice of Proposed Rulemaking, *Building for the Future Through Electric Regional Transmission Planning and Cost Allocation and Generator Interconnection*, 179 FERC ¶ 61,028 at P 39 (2022); Claire Wayner, *Increased Spending on Transmission in PJM -- Is it the Right Kind of Line?*, RMI (Mar. 20, 2023), <https://perma.cc/SY72-QY45> (showing that 71% of all transmission investment in PJM since 2014 has been on low-voltage lines as opposed to 26% before 2014, and that the proportion of total investment in local spending has surged since 2014).

369. PJM Consolidated Transmission Owners' Agreement, § 5.2 (2023), <https://perma.cc/T5FH-KHQM> [Hereinafter PJM Transmission Owners Agreement] ("Each Party shall have the right to build, finance, own, acquire, sell, dispose, retire, merge or otherwise transfer or convey all or any part of its assets, including any Transmission Facilities . . .").

370. Wayner, *supra* note 368 (finding that faster timelines and lower cancellation rates of rebuilds and other local projects lead to 16 to 24% higher utility earnings than regional projects on a net present value basis).

371. See generally Comment of the Harvard Electricity Law Initiative, Docket No. AD22-8 (Mar. 23, 2023).

would replace facilities that IOUs retire.³⁷² Changes to the member-controlled Operating Agreement were pushed by a transmission developer that sought more opportunities for regional competition and transmission customers who wanted to discipline IOU local planning. Seeking to prevent PJM from blocking their control over wreck-and-rebuild projects, IOUs filed a competing proposal at FERC through the PJM transmission owner committee to amend the PJM tariff so it explicitly states that wreck-and-rebuild projects are within the scope of the IOUs' local planning.³⁷³

PJM protested its members' proposal. PJM told FERC that expanding PJM's planning role requires the IOUs' consent.³⁷⁴ The members' proposed expansion, according to PJM, would be "counter to the authority transferred to PJM" by the region's IOUs.³⁷⁵ PJM members and stakeholders, meanwhile, urged FERC to reject the IOUs' filing, arguing that only PJM members, acting through the high-level member committee, have authority to file amendments to transmission planning processes contained in PJM's Operating Agreement.³⁷⁶ PJM's protest reflected its subservience to its IOU members on transmission development. This controversy over local planning provided PJM with an opportunity side with its non-IOU members and attempt to increase the scope of its planning responsibilities. Instead, PJM yielded to its IOUs to the detriment of regional control and efficiency.

FERC approved the IOUs' proposals. It found that a catch-all provision in the PJM-IOU agreement that reserves to the IOUs "rights not specifically granted to PJM," as well as another provision preserving IOU rights to "maintain" their transmission facilities allows the IOUs to control wreck-and-rebuild projects.³⁷⁷ In a separate proceeding, FERC rejected the stakeholders' proposal, finding that it attempted to "go[] beyond the scope of planning responsibilities delegated to PJM."³⁷⁸ Consumer advocates and other parties appealed to the D.C. Circuit. Oral A decision is pending as of October 2023.³⁷⁹

RTO regional planning goals are also vulnerable to IOU interference through their control over regional cost allocation methods. IOUs in PJM and ISO-NE have filing authority over regional cost allocation,³⁸⁰ while MISO IOUs have shared authority with state regulators and MISO itself.³⁸¹ Under Order No. 1000, competition only applies to transmission projects paid for by at least two RTO

372. *PJM Interconnection*, 173 FERC ¶61,242 at PP 7–8 (2020).

373. *PJM Interconnection, et al.*, 172 FERC ¶61,136 at PP 14–23 (2020).

374. Comments of PJM Interconnection, Docket No. ER20-2308 (Jul. 2, 2020) (stating that it may not expand its planning role "without a corresponding grant of authority from the Transmission Owners").

375. *Id.* ("While the Joint Stakeholders propose to modify the definition of Supplemental Projects in the Operating Agreement, such revisions are counter to the authority transferred to PJM under the [Consolidated Transmission Owners Agreement] CTOA, as the Transmission Owners did not transfer to PJM the authority to plan for the enhancement and expansion of the Transmission System for anything beyond 'demands of firm transmission service in the PJM Region.'").

376. 172 FERC ¶61,136 at PP 36–39, 49, 81 (2020).

377. 172 FERC ¶61,136 at PP 82–83 (2020).

378. 173 FERC ¶61,242 at P 54 (2020).

379. *American Municipal Power v. FERC*, D. C. Circuit Docket No. 20-1449.

380. PJM Transmission Owners Agreement, *supra* note 369, § 7.3.1; ISO-NE Transmission Operating Agreement, *supra* note 360, § 3.04(b), (c).

381. MISO Transmission Owners Agreement, *supra* note 267, appendix K.

members pursuant to the RTO's regional cost allocation methodology. By altering regional cost allocation methods, IOUs can assign all project costs to a single IOU and thereby block transmission competition, maintain their local monopolies, and profit by being automatically designated by the RTO as the transmission developer. IOUs in MISO and PJM have proposed several cost allocation methods that effectively exempt projects from competition by allocating their costs to a single IOU.³⁸² Apart from the competitive implications, authority over cost allocation determines who pays how much for regional projects. Cost allocation can significantly affect the scope and scale of regional transmission development, and IOUs have at least attempted to limit regional development through unfavorable cost allocation methods.³⁸³

IOUs are also able to undermine objectives of RTO-run energy and capacity markets. Free entry is a fundamental component of competitive markets,³⁸⁴ but IOUs have unique incentives and abilities to block new competitors.³⁸⁵ In wholesale power markets, the process of interconnecting new generators to the transmission system facilitates new entry. IOUs have attempted to raise interconnection costs by inflating costs of network upgrades. Interconnection costs have been increasing across the country, and this trend is driven primarily by the need to upgrade existing transmission facilities to accommodate interconnecting generators.³⁸⁶ While IOUs are generally responsible for constructing these network upgrades, interconnecting generators must pay for them. In RTOs, generators have enjoyed the option of financing the costs of those upgrades themselves.³⁸⁷ IOUs in PJM and NYISO recently attempted to remove that option and instead require that generators pay the interconnecting IOU for the full costs of the upgrade plus that IOU's rate of return. Protesting generators claimed that allowing IOUs to profit would "significantly increase costs," and that some projects would be "rendered uneconomic and cancelled."³⁸⁸

382. *PJM Interconnection*, 154 FERC ¶ 61,096 (2016) (allocating all costs of projects designed to meet an IOU's self-defined planning criteria to the local IOU), *vacated*, *Old Dominion Elec. Coop. v. FERC*, 898 F.3d 1254 (D.C. Cir. 2018); *MISO, et al.*, 142 FERC ¶ 61,215 at PP 484–488, 518–529 (2013), *aff'd*, *MISO Transmission Owners v. FERC*, 819 F.3d 329 (7th Cir. 2016); *MISO*, 167 FERC ¶ 61,258 at PP 56–65 (2019) (rejecting proposal to identify regional benefits of certain types of projects but allocate all costs to the local IOU).

383. *See, e.g.*, Jeff St. John, *Grid Operator MISO's Transmission Plan Would Split Its Region in Two*, CANARY MEDIA (Dec. 7, 2021), <https://perma.cc/XB48-Z3YE> (explaining that MISO proposed to allocate costs of projects in MISO North only to transmission owners in that region in order to overcome opposition from Entergy, which is in MISO South, that had threatened to derail all regional planning).

384. N. Gregory Mankiw, *PRINCIPLES OF MICROECONOMICS*, 8th Ed. 268 (2018) (stating that free entry is "sometimes thought to characterize perfectly competitive markets" and that free entry and exit "is a powerful force shaping the long-run equilibrium"); Order No. 2003, *supra* note 162, at P 11 (2003) (recognizing that "relatively unencumbered entry into the market is necessary for competitive markets").

385. Order No. 2003, *supra* note 162, at PP 11–12.

386. Joachim Seel et al., *Interconnection Cost Analysis in PJM Territory*, LAWRENCE BERKELEY NAT'L LAB. (Jan. 2023), <https://perma.cc/W6DC-FP6Q> (finding that "broader network upgrade costs are the primary driver" of recent interconnection cost increases in PJM); Joachim Seel et al., *Generator Interconnection Costs to the Transmission System*, LAWRENCE BERKELEY NAT'L LAB. (Jun. 2023), <https://perma.cc/9BHF-NXNP> [Hereinafter Seel et al. on National Interconnection Costs] (finding that "broader network upgrades triggered by new interconnection requests mostly behind recent cost increases" across five studied regions).

387. *See, e.g.*, *PPL Electric Utilities Corp., et al.*, 177 FERC ¶ 61,123, at PP 3–5 (2021) (outlining the history of FERC's policy on financing network upgrade costs).

388. *Id.* at P 42.

Under the foundational RTO-IOU agreements, IOUs claim the exclusive right to file changes to their “revenue requirement,” or the amount of money they earn from transmission rates, as well as the structure of those rates.³⁸⁹ This filing right is worded differently in the various agreements. For PJM, FERC determined that IOUs could file this proposed change to network upgrade rates and established a proceeding to determine whether the resulting rates would be just and reasonable.³⁹⁰ For NYISO IOUs, however, FERC held that this proposed change to network upgrade rates was beyond the scope of IOUs’ filing rights and therefore rejected their filing.³⁹¹ SPP filed a similar proposal, which FERC rejected.³⁹² In MISO, following several FERC proceedings and a federal court appeal, IOUs gained the right to profit from network upgrades for new generators.³⁹³ However, a federal court then remanded FERC’s order, leaving the status of network upgrade funding in doubt.³⁹⁴ In a separate proceeding, FERC rejected MISO’s proposal to apply this funding structure to network upgrades needed to accommodate certain non-utility transmission projects.³⁹⁵

RTOs have filing rights over interconnection procedures outlined in their transmission tariffs.³⁹⁶ Interconnection processes include technical studies that determine whether the transmission system must be upgraded to accommodate energy injections by the new generator. RTOs may delegate technical studies to their IOU members.³⁹⁷ Allowing the IOU to participate in these studies perpetuates the conflicts of interest that FERC sought to neutralize with its 2003 rules.³⁹⁸ The rules do not penalize IOUs for study delays,³⁹⁹ which can forestall market entry for years or even doom projects.⁴⁰⁰ IOUs are also able to insert

389. PJM Transmission Owners Agreement, *supra* note 369, § 7.3.1; MISO Transmission Owners Agreement, *supra* note 267, appendix K, § II.A; ISO-NE Transmission Operating Agreement, *supra* note 360, § 3.04(a), 3.04(c)(i)(A); SPP Bylaws, *supra* note 266, § 3.10.

390. 177 FERC ¶ 61,123 at PP 34–37.

391. *NYISO, et al.*, 176 FERC ¶ 61,143 (2021), *reh’g denied*, 178 FERC ¶ 61,194 at PP 26–36 (2022).

392. *SPP*, 183 FERC ¶ 61,015 (2023).

393. *MISO*, 164 FERC ¶ 61,158 at PP 7–16 (2018) (summarizing the previous proceedings and appeal and granting the “unilateral right of the transmission owner to elect the Transmission Owner Initial Funding”).

394. *Am. Clean Power Ass’n. v. FERC*, 54 F.4th 722 (D.C. Cir. 2022).

395. *MISO*, 179 FERC ¶ 61,074 (2022).

396. In ISO-NE, IOUs hold filing rights over “the methodology by which the costs of Transmission Upgrades related to generator interconnections are allocated.” ISO-NE Transmission Operating Agreement, *supra* note 360, § 3.04(b)(i). Because these upgrade costs are now the primary driver of escalating interconnection costs, *infra* note 386, and allocation of these costs is tied up with other aspects of the interconnection process, IOU control could substantially affect the pace of new entry.

397. *See, e.g.*, PJM, *Business Practice Manual 14A: New Services Request Process*, § 4.2 (Aug. 24, 2021), <https://perma.cc/PS7X-EFQV> (“PJM and the Interconnected Transmission Owner will conduct the Generation or Transmission Interconnection Feasibility Study . . .”); *id.* at § 4.3.1 (“PJM, in coordination with any affected Interconnection Transmission Owner(s), shall conduct System Impact Studies . . .”); *MISO*, 158 FERC ¶ 61,003 at P 72 (2017) (noting that MISO hires its IOU members to conduct interconnection studies).

398. *See e.g.*, *Monitoring Analytics*, *supra* note 54, at 705 (finding a “potential conflict of interest” when an IOU performs an interconnection study and recommending outsourcing studies to an independent third party).

399. Order No. 2023, *Improvements to Generator Interconnection Procedures and Agreements*, 184 FERC ¶ 61,054 at P 872 (stating that FERC’s standardized interconnection agreement does not impose deadlines or penalties on transmission providers related to interconnection); *id.* at P 962 (imposing fines for study delays).

400. *MISO*, 158 FERC ¶ 61,003 at P 88 (2017) (rejecting suggestions that the Commission impose penalties for delayed studies); *PJM Interconnection*, 181 FERC ¶ 61,162 at P 133 (2022) (summarizing trade

assumptions into technical studies that increase interconnection costs. In MISO, for instance, some IOUs allegedly “cooked the books” by using “inflated and unrealistic operating scenarios” in interconnection studies in order to raise costs.⁴⁰¹

MISO IOUs have a more direct means of harming their generation competitors. RTOs operate markets for certain grid reliability services, such as the ability to quickly inject energy into the transmission system.⁴⁰² Under the foundational MISO-IOU agreement, IOUs and MISO independently hold filing rights over these ancillary services.⁴⁰³ In 2022, the IOUs filed to eliminate certain payments for reactive power, a reliability service that generators were paid for through cost-of-service rates.⁴⁰⁴ While RTOs do not yet have a market-based system for reactive power supply, it is plausible that they may develop one, perhaps alongside other markets for new reliability products. Some experts project that these markets will expand as the penetration of wind and solar increases.⁴⁰⁵ But in MISO, IOUs can avoid any regional decisionmaking process about ancillary services and instead unilaterally determine whether and how to pay for reliability.

IOUs also hold filing rights over transmission charges assessed on energy imports and exports.⁴⁰⁶ As discussed in Part II, IOUs tend to oppose — or at least not advocate for — interregional transmission because it can diminish IOUs’ control and undermine their generation investments.⁴⁰⁷ Despite lack of IOU

group’s comment that PJM’s tariff does not impose penalties for delays and that such delays can be costly for generators and can cause them to lose permits or site control); Joseph Rand et al., *Queued Up: Characteristics of Power Plants Seeking Transmission Interconnection As of the End of 2021*, LAWRENCE BERKELEY NAT’L LAB. (Apr. 2022), <https://perma.cc/5A4W-3296> (finding that the “typical duration” for an interconnection process has “increased sharply since 2015” and now exceeds three years); Seel et al. on National Interconnection Costs, *supra* note 386 (finding that average interconnection costs have increased in all five studied regions and that projects that withdraw from the interconnection process have the highest interconnection costs).

401. Transcript, FERC Technical Conference on Transmission Planning and Cost Management, FERC Docket AD22-8, at 73:5–11 (Oct. 6, 2022) (former Wisconsin utility regulator Lauren Azar explained that some IOUs in MISO use “restrictive local planning criteria” in interconnection studies in order to raise costs on potential new entrants and suggesting that the issue may be getting worse despite MISO’s apparent efforts); Lauren Azar, Written Statement, Docket No. AD22-8 (Sep. 27, 2022) (explaining the problem in more detail).

402. Sun et al., *supra* note 34, at 2.1 (summarizing RTO markets for reserve products).

403. MISO Transmission Owners Agreement, *supra* note 267, appendix K, §§ II.G, I; MISO, 122 FERC ¶ 61,305 at P 24, *aff’d in part*, *Dynegy Midwest Generation, Inc. v. FERC*, 633 F.3d 1122, 1128–29 (D.C. Cir. 2011).

404. MISO, 182 FERC ¶ 61,033 (2023). Non-utility generators estimated that producers were paid \$220 million per year for providing reactive power. Protest of Vistra Corp. and Dynegy Marketing and Trade, LLC, FERC Docket No. ER23-523, at 3 (Dec. 21, 2022) (citing MISO data).

405. See, e.g., Frank Wolak, *Market Design in a Zero Marginal Cost Intermittent Renewable Future*, IEEE POWER AND ENERGY MAG., at 32 (Jan./Feb. 2021) (“Introducing additional ancillary services to accommodate a larger share of intermittent renewable energy may also be needed.”); Joachim Seel et al., *Impacts of High Variable Renewable Energy Futures on Wholesale Electricity Prices, and on Electric-Sector Decision Making*, LAWRENCE BERKELEY NAT’L LAB., at 5.8 (May 2018), <https://perma.cc/6AB7-4K3R> (modeling various future generation scenarios and finding that prices of certain ancillary service products increase by a factor of two to eight with higher penetrations of wind and solar); PJM, *Energy Transition in PJM: Emerging Characteristics of a Decarbonizing Grid*, at 19 (May 17, 2022), <https://perma.cc/29N9-MHPW> (modelling three future generation scenarios and finding that the total volume procured and price of certain ancillary services increases with higher penetrations of wind and solar); Lau & Hobbs, *supra* note 25, at 19–20.

406. MISO Transmission Owners Agreement, *supra* note 267, appendix K, § II.D; ISO-NE Transmission Operating Agreement, *supra* note 360, § 3.04(b)(i). See also MISO Transmission Owners Agreement, *supra* note 267, appendix K, § II.J (requiring MISO to “invite the participation” of transmission owners to discussions about agreements with neighboring regions).

407. *Supra* notes 66–76 and accompanying text.

enthusiasm, there is still hope for interregional expansion. Other market participants, such as non-utility transmission developers and generation developers, could potentially fill the gap. However, the IOU-set import-export charges are effectively a toll that could challenge the profitability of non-utility interregional transmission.⁴⁰⁸

When IOUs make regionally significant decisions, such as changing the import-export charges, they work through transmission-owner committees created by foundational RTO-IOU agreements.⁴⁰⁹ These committees highlight the unique relationships between RTOs and IOUs. For instance, PJM transmission owners signed an agreement with PJM that facilitates confidentiality between PJM and the transmission-owner committee members.⁴¹⁰ An explicit purpose of the agreement is to bypass regional governance and allow the parties to change transmission rules controlled by the IOUs without participation or knowledge of other parties. PJM does not have similar standing arrangements with other market participants. PJM members that oppose these or other filings are not able to benefit from any confidential analysis prepared by PJM staff.

PJM-member IOUs zealously protect their special relationship with the PJM. For instance, at their annual closed-door meeting with PJM management and board members, the IOUs expressed concern about “attempts to undermine the unique relationship between PJM and the Transmission Owners” and urged PJM to “take a greater leadership role in policing improper incursions into” the foundational PJM-IOU agreement.⁴¹¹ These veiled threats, sanitized by PJM staff for public disclosure, to the RTO’s leadership are credible. RTOs are dependent on their IOU members voluntarily ceding partial control over their transmission assets. Subject to FERC’s approval, a utility could remove its assets from RTO control, which would diminish the scope of the RTO’s territory and could impair the RTO’s operations and planning, and even lead to the RTO’s dissolution.⁴¹² IOUs

408. See Comments of Grid United, FERC Docket No. RM21-17 (Oct. 12, 2021) (criticizing how interregional transmission charges are calculated, claiming that they are “excessive” and that they “disrupt new investment in interregional transmission,” summarizing the “checkerboard” of charges and waivers between RTOs, noting that market monitors have called for reforms, and urging FERC to take action).

409. ISO-NE Transmission Operating Agreement, *supra* note 360, § 11.04 (creating the PTO Administrative Committee); MISO Transmission Owners Agreement, *supra* note 267, article II, § VI.B (creating the Owners Committee); PJM Transmission Owners Agreement, *supra* note 369, article 8 (creating the Administrative Committee).

410. PJM Transmission Owners Agreement-Administrative Committee, Confidentiality and Common Interest Agreement (Sep. 13, 2011), <https://perma.cc/FE3M-SMQ4>.

411. PJM INTERCONNECTION, Board Communications, *Letter Regarding Board Members’ Meeting with Members of the Transmission Owners Sector* (Dec. 19, 2022), <https://perma.cc/A7ET-LKAL>.

412. See Ari Peskoe, *ISO-NExit: Exploring Pathways for a Utility’s Withdrawal from New England’s Regional Transmission Organization*, HARVARD ELECTRICITY LAW INITIATIVE (Apr. 2020), <https://perma.cc/JR2F-A8CA> (summarizing the legal process for a utility’s withdrawal from ISO-NE and speculating how and why FERC might block the withdrawal); Kavulla, *supra* note 99, at 5–6 (describing the “built-in conflict of interest where RTO management is always looking over its shoulder to appease transmission owners at the expense of other parties, including consumers”). More than a decade ago, several IOUs switched RTOs and another departed entirely from RTO control. *Duquesne Light Co.*, 122 FERC ¶ 61,039 (2008) (approving move from PJM to MISO); *American Transmission Systems Inc., FirstEnergy v. PJM*, 129 FERC ¶ 61,249 (2009) (approving move from MISO to PJM); *Duke Energy Ohio, et al.*, 133 FERC ¶ 61,058 (2010) (approving move from MISO to PJM); *Louisville Gas and Electric Company, et al.*, 114 FERC ¶ 61,282 (2006) (approving withdrawal from MISO).

continue to threaten to remove their transmission from RTO control.⁴¹³ As a result, RTO boards or management may subordinate regional benefits to IOUs' financial and strategic interests, or at least implicitly delegate key decisions to IOUs, including issues that RTOs formally control.⁴¹⁴

VI. INDUCING GOVERNANCE REFORMS

FERC maintains that it has broad jurisdiction over RTO governance, and in particular may regulate internal RTO processes that determine tariff amendment filings.⁴¹⁵ FERC has never been asked to defend this position in court. In this part, I explain how FERC could induce regional governance reforms without litigating its assertion of authority. FERC's reform agenda should aim at disentangling RTOs from their IOU creators and promoting under-represented voices in RTOs, such as state regulators, who can be a counterweight to entrenched power.

FERC could claim legal authority to mandate these reforms, rather than inducing them through voluntary adoption. FERC has "broad authority to remedy unduly discriminatory behavior"⁴¹⁶ and "broad discretion" in fashioning remedies to such anti-competitive activity.⁴¹⁷ Because the reforms I suggest below are primarily aimed at bolstering RTO independence, a principle that is rooted in FERC's anti-discrimination agenda, they ought to fit comfortably within FERC's authority to remedy undue discrimination.⁴¹⁸ However, federal courts are increasingly unpredictable in cases about novel administrative action, and FERC may want to avoid claims about agency overreach.⁴¹⁹

A. *Spurring Reforms with the Independent Entity Variation*

To justify jurisdiction over RTO governance processes, FERC relies on the Supreme Court's 2016 *EPSA* decision that cemented FERC's authority over utility practices that "directly affect" interstate transmission and power rates.⁴²⁰ In *EPSA*, the Court concluded that an RTO rate structure that pays companies to reduce energy use is a utility "practice" that "directly affects" rates and therefore within

413. I have heard numerous accounts of such threats. These threats are never put in writing.

414. PJM has acknowledged this dynamic. See *PJM Interconnection, et al.*, 92 FERC ¶ 61,282, at p. 61,958 (2000) ("PJM argues that the right to withdraw without notice could undermine [RTO] independence since there would be a constant overhanging threat that a TO may withdraw if it disagrees with [RTO] action.")

415. *Supra* notes 202–207 and accompanying text.

416. See, e.g., *Transmission Access Pol'y Study Grp. v. FERC*, 225 F.3d 667, 687 (D.C. Cir. 2000) (holding that the FPA's "ambiguous antidiscrimination provisions . . . giv[e] [FERC] broad authority to remedy unduly discriminatory behavior"); *Louisiana Energy & Power Auth. v. FERC*, 141 F.3d 364, 370 (D.C. Cir. 1998); *National Fuel*, 468 F.3d 831, 839–844 (D.C. Cir. 2006); *Louisiana Pub. Serv. Comm'n v. FERC*, 551 F.3d 1042, 1045 (D.C. Cir. 2008); *Sacramento Mun. Util. Dist. v. FERC*, 616 F.3d 520, 542 (D.C. Cir. 2010).

417. Order No. 890 at P 1322; *Consolidated Gas Co. of Florida, Inc. v. Florida Gas Transmission Co.*, 29 FERC ¶ 61,205 at p. 61,416 (1984); *James River Corp. of Nevada v. Northwest Pipeline Corp.*, 42 FERC ¶ 61,344, at pg. 9 (1988); *ANR Pipeline Co. v. Transcontinental Gas Pipe Line Corp.*, 91 FERC ¶ 61,066 at p. 61,233 (1991); *Pennsylvania-New Jersey-Maryland Interconnection, et al.*, 92 FERC ¶ 61,282, at p. 61,955 (2000); *Missouri Gas Energy v. Panhandle Eastern Pipeline Corp.*, 75 FERC ¶ 61,166, at p. 61,549 (1996) ("[T]he Commission has 'broad power to stamp out undue discrimination,' (citations omitted)).

418. See *infra* notes 84–92 and accompanying text.

419. See, e.g., Lisa Heinzerling, *The Power Canons*, 58 WM. & MARY L. REV. 1933, 1982–86 (2017) (explaining how recent Supreme Court administrative law decisions "defeat predictability in several ways").

420. *FERC v. Elec. Power Supply Ass'n.*, 577 U.S. 260 (2016).

FERC's authority to regulate. The Court did not set any limits on FERC's "directly affecting" authority by demarcating between those utility practices that directly affect jurisdictional rates and those that do not.

The *CAISO* panel, however, did draw a distinction between utility practices that directly affect rates and "remote things beyond the rate structure that might in some sense indirectly or ultimately" affect rates.⁴²¹ Should FERC impose governance reforms, opponents would likely argue that RTO governance is too "remote" to directly affect rates, and that the *EPSA* Court did not hold that FERC's authority extends beyond "rate structures." FERC could respond that the *CAISO* panel held only that FERC "does not have the authority to reform and regulate the governing body of a public utility."⁴²² This holding is strictly limited to the facts of that case and does not limit FERC's jurisdiction over governance matters that directly affect rates. FERC can also point to its orders about unduly discriminatory regional IOU alliances, as summarized in part IV, to argue that there is nothing "unheralded" or "transformative" about its regulation of RTO governance.⁴²³

FERC could also argue that the *CAISO* court's policy arguments are irrelevant. The D.C. Circuit feared that if it upheld FERC's order firing *CAISO*'s board FERC might use that authority to hire and fire IOU board members.⁴²⁴ The panel observed that other agencies, such as the Securities and Exchange Commission, regulate corporate governance, and that FERC authority over corporate boards would be redundant or even conflicting. But no such overlap would exist for RTO governance. FERC's assertion over internal RTO decisionmaking structures and processes would not extend to analogous processes at IOUs. IOUs do not have "members" engaged in similar decisionmaking processes that directly affect FERC filings. Moreover, no other regulator can claim authority over RTO governance. This would be a winnable case for FERC. Nonetheless, to avoid the uncertainty of litigation, I suggest that FERC craft a voluntary approach. As I described in part IV.C, FERC orders during and after the *CAISO* litigation provide a replicable model for reforming RTO governance.

First, FERC should promulgate new governance criteria that are necessary to support RTO independence. Second, in all transmission rules, FERC should include compliance options for RTOs that FERC certifies as compliant with all governance principles. Third, FERC should allow only RTOs that fully comply with its governance principles and processes to use these more favorable compliance options.⁴²⁵

FERC could also revisit existing transmission rules so they distinguish between RTO compliance and IOU compliance. For instance, FERC has already found that transmission planning can be tainted by IOUs' incentives to unduly

421. *CAISO*, 372 F.3d at 403.

422. *Id.* (emphasis added).

423. Natasha Brunstein and Donald L. R. Goodson, *Unheralded and Transformative: The Test for Major Questions After West Virginia*, 47 WM. & MARY ENV'T L. & POL'Y REV. 47 (2022) (arguing that the Supreme Court's Major Questions Doctrine applies only when agency action is "unheralded" and represents a "transformative" change in the agency's authority).

424. *CAISO*, 372 F.3d at 404.

425. At least one RTO-IOU agreement requires the RTO to maintain its RTO status. PJM Transmission Owners Agreement, *supra* note 369, § 6.3.5.

discriminate.⁴²⁶ But FERC's transmission planning rules do not impose stricter requirements on IOUs as compared to RTOs. As noted in part IV.e, non-RTO IOUs have not planned any projects pursuant to FERC's regional planning rules, a simple fact that provides a straightforward basis for reopening the regional planning rule for the limited purpose of adding requirements for non-RTO IOUs.

Of course, some IOUs would fight any new rules in court and in the halls of Capitol Hill. Industry lobbying has undoubtedly influenced FERC actions.⁴²⁷ FERC would also have to be cautious that any RTO governance reforms do not lead IOUs to abandon RTOs entirely. Although IOUs need FERC's permission to leave an RTO,⁴²⁸ as long as RTO membership is voluntary, IOUs can (and do) threaten to unravel RTOs if FERC attempts to mitigate utility influence in governance processes.

A complementary approach would offer incentives to IOU members of RTOs that meet any expanded governance principles. FERC has broad authority to include incentives in transmission rates,⁴²⁹ and it has been awarding incentives to utilities that join RTOs since the early 2000s.⁴³⁰ A combination of carrots (ROE incentives) and sticks (voluntary governance reforms and new transmission rules) would effectively reward IOUs for being in a compliant RTO.

In the remaining sections of the paper, I suggest items for a governance reform agenda.

B. Supporting Independence with a Transparency Principle

RTO governance is structured around the independence principle. FERC explained in its initial Open Access order and subsequent RTO guidelines that an RTO's independence from market participants was essential for becoming a trustworthy platform for all market participants. The compositions of RTO boards and key member/stakeholder committees were supposed to ensure that no sector can control decisionmaking. FERC's responsiveness criteria were supposed to complement the independence principle.⁴³¹ FERC believed an affirmative responsiveness obligation would provide stakeholders with "confidence" in RTOs' "independent governance processes."⁴³²

426. *Supra* notes 213–214.

427. FERC terminated its Standard Market Design proceeding in 2005 in part due to push back from Congress. More recently, FERC rescinded policy statements about approving natural gas pipelines and reviewing their emissions following pushback from Congress that was influenced by the industry. Miranda Wilson, E&E NEWS, *FERC Climate Reviews in Limbo as Glick Departs* (Dec. 15, 2022), <https://perma.cc/S5PB-JQRT>.

428. Peskoe, *supra* note 412.

429. *See, e.g.*, Permian Basin Area Rate Cases, 390 U.S. 747 (1968) (holding that incentive pricing was permissible under the Natural Gas Act); *Construction Work in Progress for Electric Utilities*, 48 Fed. Reg. 24,323 (Jun. 1, 1983) (establishing regulations to govern the inclusion of the costs of construction work in progress (CWIP) in the rate base of public utilities).

430. *See, e.g.*, *MISO*, 100 FERC ¶ 61,292 at P 31 (2002) (awarding a 50 basis points ROE adder to utilities that turned operational control of transmission facilities to MISO and stating it will "consider providing additional upward adjustments for greater levels of independence"). The Energy Policy Act of 2005 required FERC to "provide for incentives" to any utility that joins a "Transmission Organization," a defined statutory term that may not be limited to entities that meet FERC's independence rules. *See* 16 U.S.C. § 824s; 16 U.S.C. § 796(29).

431. Order No. 719, *supra* note 10, at P 507 (stating that responsiveness would ensure that "no single stakeholder group can dominate").

432. *Id.* at P 503.

However, as I've discussed, both the independence principle and responsiveness criteria favor incumbents over new entrants and stasis over innovation. Because governance has stagnated, decisionmaking processes centered around member sectors benefits entrenched firms. Similarly, RTO board "responsiveness" can provide entrenched players with privileged access. Governance reforms should mitigate incumbent influence and control.

I propose a transparency principle aimed at ensuring the RTO advances information sharing over secrecy and provides the same information to all members and stakeholders. A transparency principle would prevent an RTO from exchanging confidential information with its IOU members about routine rule changes. This practice in PJM benefits IOUs in FERC proceedings and may forge inappropriate relationships between RTO staff and IOU members.⁴³³

Information transparency is at the heart of FERC's Open Access transmission rules.⁴³⁴ Control over transmission information can be used to block competition and bias transmission planning. Transmission information is also critical for identifying how and where advanced transmission technologies could provide value to consumers. Transparency can also lead to disclosure of information that would enhance competition and consumer protection.⁴³⁵ While RTOs provide far more information about regional networks than IOUs that operate their own transmission, a new transparency principle could root out information policies that favor incumbents and drive innovation that benefits consumers.

C. Revisiting Filing Rights, Member Sectors, and Rulemaking Processes

Following the D.C. Circuit's *Atlantic City* decision, FERC approved settlement agreements between each RTO and its member IOUs that allocated filings rights.⁴³⁶ FERC then warned utilities that if they "use their filing rights in a way that compromises RTO independence or functions or causes undue discrimination between or among RTO members or customers," FERC would revisit these settlements.⁴³⁷ FERC noted that while it lacks legal authority to eliminate utilities' filing rights, it could give RTOs additional filing rights.⁴³⁸ Moreover, FERC pledged to "exercise careful oversight in connection with these matters and, if appropriate, institute a Section 206 proceeding to do so."⁴³⁹

433. See *supra* notes 409–414 and accompanying text.

434. Utility Transmission Syndicate, *supra* note 12, at 2 ("FERC's reforms to transmission operations and planning have been guided by two key principles: comparability and transparency").

435. For instance, generators proposing to retire must provide advanced notice that provides the RTO with sufficient time to ensure the retirement will not affect reliability. Disclosure to market participants can allow them to plan investments that profit from the generation capacity reduction or decrease their exposure to potential market price impacts. But MISO prioritizes the interests of generation owners, who are mostly IOUs, and keeps retirement notices secret. See *MISO*, 182 FERC ¶ 61,066 at PP 7–10 (2023) (summarizing opposition to secrecy); *id.* at Clements concurrence ("Where possible, the Commission seeks to leverage competitive markets and good planning processes for the benefit of the consumers we are assigned to protect. But those tools work only as well as the information available to market participants and other stakeholders. ").

436. See sources cited at note 144.

437. *PJM Interconnection, et al.*, 105 FERC ¶ 61,294 at P 33.

438. *Id.* at n. 34.

439. *Id.*

FERC could finally do what it promised and investigate IOU filing rights.⁴⁴⁰ To bolster RTO independence, FERC could expand filing rights over regionally significant issues that are currently controlled by the IOUs, such as cost allocation for regional transmission expansion. For instance, FERC could provide RTOs with independent filing rights over regional cost allocation and local planning. In the event that an RTO and its IOU members file competing proposals, FERC would determine if either proposal is “preferable.”⁴⁴¹

State regulators are also potential beneficiaries. State utility commissions comprehensively regulate IOUs’ local service and are familiar with IOUs’ local operations and planning. State filing rights might serve a consumer protection function, as state regulators are ultimately responsible for ensuring that retail rates, which include costs of RTO-planned transmission projects and RTO-administered markets, appropriately account for consumers’ interests.

As noted, the MISO and SPP agreements already provide state regulators with limited filing rights over transmission cost allocation or resource adequacy, two areas where states have overlapping oversight.⁴⁴² In the other two multi-state RTOs, where state regulators have little or no formal authority, RTO market rules have clashed with state clean energy policies.⁴⁴³ In retaliation, several PJM states investigated whether to order their utilities to withdraw from PJM or its capacity auction.⁴⁴⁴ In New England, the governors launched a multi-year effort to re-imagine the role of ISO-NE.⁴⁴⁵ Providing states with meaningful roles in RTO processes might mitigate future conflicts between states’ priorities and RTO rules and planning processes.

A more drastic option is to provide currently under-represented RTO members with filing authority. To remedy governance stagnation, FERC could require RTOs to create a new member sector for companies providing technologies that were not commercially available when FERC initially approved RTO governance structures. Members of this new innovation sector would include advanced transmission technology providers, distributed energy resource aggregators, and storage developers. Because these companies have different business models, empowering this sector with limited filing authority would not infringe on FERC’s prohibition against providing decisionmaking authority to a single class of market participants.

440. Proceedings about FERC’s rescissions of so-called “rights of first refusal” that granted IOUs exclusive transmission development privileges are instructive. See *SPP, et al.*, 144 FERC ¶ 61,059 at P 133 (2013), *aff’d*, Oklahoma Gas and Elec. Co. v. FERC, 827 F.3d 75, 80 (D.C. Cir. 2016); *MISO*, 142 FERC ¶ 61,215 at P 183 (2013), *aff’d*, MISO Transmission Owners v. FERC, 819 F.3d 329, 335 (7th Cir. 2016); *ISO-NE*, 143 FERC ¶ 61,150 at P 169 (2013), *aff’d*, Emera Maine v. FERC, 854 F.3d 662 (D.C. Cir. 2017); *PJM Interconnection, et al.*, 142 FERC ¶ 61,214 at P 189 (2013), *aff’d*, Am. Transmission Sys. Inc., v. FERC, 2016 WL 3615443 (D.C. Cir. 2016, unpublished) (dismissed for lack of jurisdiction).

441. See *ISO-NE and New England Power Pool*, 130 FERC ¶ 61,105 at P 51 (2010) (explaining that an agreement between ISO-NE and its members allows the members to compel ISO-NE to file a competing section 205 proposal and then provides that FERC choose the “preferable” option).

442. *Supra* notes 337–344 and accompanying text.

443. Welton, *supra* note 7, at 246–49, 257–260; Joshua C. Macey and Robert Ward, *MOPR Madness*, 42 Energy L. J. 67, 110–11 (2021).

444. Catherine Morehouse, *Maryland, Illinois May Pursue Legislative MOPR Exit, Despite New FERC Nearing*, UTILITY DIVE (Dec. 11, 2020), <https://perma.cc/7R6T-PW7E>.

445. NEW ENGLAND STATES COMMITTEE ON ELECTRICITY, *Report to the Governors: Advancing the Vision*, at 3 <https://perma.cc/4J53-7DRP>.

This new “innovation sector” could be part of a broader reexamination of RTO member/stakeholder sectors. In its 2002 Standard Market Design proposal, FERC recognized that “lack of adequate representation” in stakeholder processes “may hinder development of alternative energy resources” that are “contrary to the business interests of certain market participants.”⁴⁴⁶ But FERC never finalized that proposal or ordered reforms to RTO sectors. Instead, in three separate orders issued over twelve years, FERC ordered RTOs to adopt new rules that facilitate participation of particular alternative energy resources.⁴⁴⁷ Rather than setting and enforcing additional technology-specific rules, an ongoing task that may overwhelm FERC’s capacity and capabilities, FERC should focus on fostering institutions that will prioritize innovation.

FERC could also review RTO rule development processes. For instance, as noted in part V.b, the SPP board has created task forces that have developed extensive reform recommendations. In PJM, the board now routinely calls for staff-driven processes that bypass standard committee-led deliberative processes. FERC could require RTOs to provide other parties with authority to initiate these processes. FERC might consider pairing this power with filing rights. For instance, state regulators with filing authority over regional cost allocation might benefit from being able to convene a stakeholder review process.⁴⁴⁸ Soliciting feedback through an RTO process might help regulators improve their proposal before filing it at FERC. Alternatively, state regulators might outline policy goals they are seeking to achieve and ask RTO members and stakeholders to suggest cost allocation methodologies. Vetting the proposals through a staff-led process could help resource-constrained state regulators.

Similarly, FERC might consider additional ways for enabling parties to access RTO resources. For instance, state authorities can utilize PJM’s technical expertise to develop transmission projects designed to achieve state policy goals. Under this “State Agreement Approach,” PJM solicited transmission project proposals to connect offshore wind facilities financed through New Jersey programs and helped New Jersey officials evaluate the proposals. State officials selected the winning projects, which will be paid for by New Jersey ratepayers via the PJM tariff.⁴⁴⁹ FERC has encouraged other RTOs to adopt this model.⁴⁵⁰

It seems plausible that advanced transmission technologies could benefit from a similar framework. PJM currently offers an “Advanced Technology Pilot Program” that has facilitated limited tests of a range of technologies.⁴⁵¹ PJM does not fund the pilot projects but instead offers its expertise, and its participation may

446. Standard Market Design NOPR, *supra* note 88, at P 667. FERC proposed to require six sectors: (1) generators and marketers; 2) transmission owners; 3) transmission-dependent utilities (such as small municipal utilities that rely on IOU-owned infrastructure); 4) “public interest groups (consumer advocates, environmental groups, citizen participation)”; 5) “alternative energy providers (e.g., distributed generation, demand response technologies, renewable energy)”; and 6) end-users and retail providers that sell power to consumers but do not own distribution infrastructure. *Id.* at P 561.

447. *Supra* note 10.

448. State regulators in MISO have this authority. *MISO and MISO Transmission Owners*, 143 FERC ¶ 61,165 at PP 4–6 (2013); *MISO Transmission Owners Agreement*, *supra* note 267, appendix K, § III.E.3.

449. *PPL Electric Utilities, et al.*, 181 FERC ¶ 61,178 at PP 2–5 (2022) (summarizing how PJM and New Jersey officials collaborated); *PJM Operating Agreement*, *supra* note 245, schedule 6, § 1.5.9.

450. *State Voluntary Agreements to Plan and Pay for Transmission Facilities*, 175 FERC ¶ 61,225 (2021).

451. PJM INTERCONNECTION, *Advanced Technology Initiative* (2023), <https://perma.cc/KFA9-WFHT>.

lend credibility to the results. This program is not enshrined in any tariff and instead administered by PJM at its discretion. Formalizing similar programs in RTO tariffs would help ensure that they are non-discriminatory. Allowing state regulators or market participants to solicit proposals for advanced technologies and select projects with the RTO's assistance could further their adoption.

D. Considering the California ISO Governance Model and Congress's Role

CAISO is the only RTO that does not employ hierarchical member or stakeholder committees. CAISO staff propose rule changes, receive comments from interested parties, and then may modify proposals based on that feedback.⁴⁵² The CAISO board, which is appointed by the Governor and approved by the state Senate, decides whether to file proposals at FERC.⁴⁵³ The process is akin to traditional notice-and-comment procedures used to develop government agency rules. All CAISO proceedings are subject to California open meetings and open record laws.⁴⁵⁴ Shelley Welton finds this structure “functions more like a state agency than [the] private clubs”⁴⁵⁵ that govern other RTOs and allows “California to maintain considerable state control over the priorities and actions of its RTO.”⁴⁵⁶ CAISO's model empowers staff and may strengthen the CAISO's independence from market participants and IOUs.

To distance themselves from incumbent firms, other RTOs could consider discarding their committee-based, member-run decisionmaking processes and adopting CAISO's approach. However, there are potential downsides. Interviews with RTO governance participants several years ago concluded that RTO “processes educate stakeholders on issues and market changes . . . and help narrow differences and forge consensus, thereby reducing litigation.”⁴⁵⁷ Lenhart and Fox point to a growing body of scholarship that finds “engaging stakeholders in governance has the potential to increase legitimacy, efficiency, effectiveness, and justice,” although this scholarship also warns that stakeholder governance can create the type “structural advantages” for incumbents that I've discussed throughout this paper.⁴⁵⁸

RTOs are themselves unlikely to disempower their own members or stakeholders. This outcome is particularly improbable in PJM, where the members have authority to file governance reforms.⁴⁵⁹ Even if FERC were to entice RTOs to diminish member influence, it seems exceedingly implausible that RTOs could renegotiate filing rights with their IOU members. Ending or limiting IOU filing rights likely requires Congressional action.

If Congress takes up power sector governance, filing authority should be at the top of its agenda. IOU filing authority is a relic of century-old utility laws focused on an individual utility's rates and terms of service. In today's regionalized industry, IOU filing rights over regionally significant issues make

452. Welton, *supra* note 7, at 229; Lenhart & Fox on Structural Power, *supra* note 6, at 9.

453. Welton, *supra* note 7, at 229.

454. Lenhart & Fox on Structural Power, *supra* note 6, at 9.

455. Welton, *supra* note 7, at 268.

456. Welton, *supra* note 7, at 230.

457. James et al., *supra* note 299, at 11.

458. Lenhart & Fox on Participatory Democracy, *supra* note 235, at 4.

459. PJM Operating Agreement, *supra* note 245, § 8.8.

little sense, and they should be eliminated. Congress could do much more. It could amend the FPA to distinguish between IOU and RTO transmission service and allow FERC to modify RTO tariff proposals to benefit non-incumbents.⁴⁶⁰ It could also empower FERC to set governance standards aimed at reducing incumbent influence and order FERC to fast-track complaints filed by market participants against RTO rules. To dilute IOUs' incentives to act anti-competitively, Congress could separate generation and transmission ownership, set uniform standards for transmission competition, and order all IOUs to cede control of their transmission assets to an RTO. I will leave it at that. These suggestions are politically ambitious, and I will not speculate on the conditions needed to overcome inevitable industry opposition.

VII. CONCLUSION

Independent regional governance is essential for squeezing efficiencies out of interstate power systems, allowing non-IOU market participants and technology providers to improve industry performance, overcoming incumbents' resistance to network expansion, and accelerating market entry. However, as implemented by RTOs, independent governance has not lived up to its full potential. Because RTO governance has stagnated, RTO decisions appear to be catering to the interests of last century's technologies, business models, and firms. IOU filing rights supercharge pro-incumbent biases in regional rules.

RTO governance needs a refresh. FERC can initiate reforms by setting new governance standards and inducing compliance through the independent entity variation. By distinguishing between independent system operators and IOU transmission providers in its rules, FERC can encourage RTOs to reform governance. Enhanced transparency, new filing authority, and reformed governance structures and processes that elevate under-represented parties can all counter pro-incumbent biases inherent in existing RTO decisionmaking structures and processes.

460. Welton, *supra* note 7, at 270 (suggesting that Congress "create a special category of review for RTO tariff filings within the Federal Power Act, providing FERC with the ability to amend portions of RTO filings and to reject solutions that it finds plausible but inferior").