IS THE UTILITY TRANSMISSION SYNDICATE FOREVER?

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Synopsis: Approved by states to act as local monopolists, investor-owned utilities (IOUs) promptly extended their reach by building transmission lines to neighboring utility systems. Transmission links transformed IOUs from state-sanctioned service providers to interstate system operators and wholesalers. With overriding control over transmission in their monopoly service territories, IOUs exploited nearby non-profit utilities and regionalized their dominance through collusive agreements with each other that obstructed competition and cartelized infrastructure development. From 1996 to 2011, FERC issued four orders that aimed to wrest the nation's high-voltage electric delivery systems from IOU control and open interstate power systems to competition.[1] FERC's agenda has since stalled. Further action is needed to disconnect transmission expansion from IOUs' state-granted service territories.

In this article, I explore the history of FERC's oversight of IOU transmission dominance. I start at the beginning, prior to FERC's existence, when states granted IOUs local service territories and provided them with dependable revenues through state-run ratemaking processes. With these "unearned advantages,"[2] IOUs built transmission infrastructure that extended their dominance to interstate power systems. In response to the financial collapse of the corporate structures that fueled IOU growth, Congress charged FERC with policing IOUs' anti-competitive practices while also encouraging their coordination. For decades, FERC generally tolerated IOU-to-IOU transmission coordination agreements that excluded competitors and discriminated against customers, believing that efficiencies gained through voluntary IOU arrangements were impossible to achieve through open competition. Once technological and regulatory changes exposed opportunities for the development of competitive wholesale power markets, FERC

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1. In this article, I will be discussing orders issued by FERC's predecessor, the Federal Power Commission. For simplicity, I will use the term FERC throughout, even when referring to FPC orders issued prior to FERC's creation in 1977.

2. I adapt this phrase from SCOTT HEMPLING, REGULATING MERGERS AND ACQUISITIONS OF U.S. ELECTRIC UTILITIES: INDUSTRY CONCENTRATION AND CORPORATE COMPLICATION 157 (2020). As he explains:

> A decades-long, government-protected provider of monopoly services has advantages when providing competitive services. Those advantages come from four main sources: customer behavior, the utility's internal characteristics, the utility's own actions and simple luck. Because these advantages arise not from risk-taking or skill, but from the utility's historic status, they are unearned.

While Hempling describes IOUs' modern-day advantages in competitive markets, I use his phrase as a shorthand to explain how IOUs were able to control transmission networks decades ago.

changed its approach and sought to restrain IOUs' transmission dominance in order to facilitate entry into the industry.

This dramatic shift — from emphasizing voluntary IOU coordination under section 202 of the Federal Power Act (FPA) to policing IOU conduct under section 206 — was predicated on FERC's decision to reclassify long-standing IOU practices as "unduly discriminatory" under the FPA. FERC concluded that anti-competitive IOU behavior was systemic and fashioned remedies, for the first time, on an industry-wide basis. FERC's reforms to transmission operations and planning have been guided by two key principles: comparability and transparency. FERC's orders require IOUs to provide their customers and their own power marketing operations with comparable transmission service, and, when planning system expansion, to consider the needs of customers on a comparable basis with their own goals. FERC has also attempted to liberate transmission information from utility control by compelling IOUs to share operational and planning data and models. Structural reforms that separate IOUs from transmission operations and planning by placing an "independent" entity between IOUs and decisionmaking aim to improve the effectiveness of FERC's comparability and transparency requirements and further neutralize IOUs' incentives to restrain competition.

IOUs often resisted these reforms, responding to FERC's orders with proposals that failed to meet FERC's minimum standards. I focus on IOUs' responses to FERC's transmission planning directives and in particular their extensive efforts to evade FERC's mandate that new projects be subject to competitive development processes. FERC has rejected the premise that century-old state laws that effectively provide IOUs with exclusive service territories grant these companies perpetual rights to develop the nation's interstate electric delivery systems. While FERC has removed certain barriers to entry for non-IOU developers, it has yet to foster a development process that stimulates significant non-IOU projects. Moreover, planning processes have not spurred adoption of new technologies that can obviate the need for local transmission projects or led to the sort of large-scale transmission projects that could efficiently integrate zero-emission renewable resources. While scholars and practitioners have focused on transmission siting challenges to unlocking renewables, I focus on the transmission planning process that selects transmission projects for development through cost-of-service rates. I offer a perspective on IOU transmission ownership that suggests the status quo is incompatible with development of large-scale interregional connections designed to integrate new wind and solar and deployment of advanced technologies that can substitute for local transmission expansion.

IOUs are at the heart of the problem. They are driven to maintain the status quo, in part by capitalizing on FERC's rules that allow them to build projects within their state-granted territories without competitive pressures and on the backs of their captive retail ratepayers. This local focus is at odds with FERC's decades-long push for regionalization, and the IOUs' defensive approach to transmission development has no place in a technologically dynamic industry. Apart from concerns about the topology and technologies of our interstate networks, FERC's duty to combat anticompetitive behavior compels it to continue chipping away at IOU transmission dominance. These entitlement-claiming century-old

companies are frustrating FERC's efforts to bring competitive discipline to transmission development.

FERC should reclaim its transmission agenda. Rather than intervene directly in IOU-controlled planning processes, I propose that FERC should induce IOUs to accept third-party controlled planning. FERC has exclusive authority to determine whether transmission spending is prudent, and in making that determination, it should consider how transmission investment is planned. FERC should issue a new policy on prudence that subjects IOU-controlled spending to scrutiny while maintaining the current presumption that independently planned transmission is prudent. My hope is that under this new approach to transmission rates, IOUs will voluntarily cede control of planning. If IOUs fail to do so, FERC retains broad authority under section 206 to police anti-competitive IOU behavior and should act decisively to separate transmission planning from IOU control.

I. THE LEGAL FRAMEWORK FOR FERC'S TRANSMISSION OVERSIGHT

Congress passed the Public Utility Act of 1935 "in the context of, and in response to, great concentrations of economic and even political power vested in" interstate utility holding companies.[3] The Act, according to the Supreme Court, "had two primary and related purposes: to curb abusive practices of public utility companies by bringing them under effective control, and to provide effective federal regulation of the expanding business of transmitting and selling electric power in interstate commerce."[4] Part I of the Act charged the Securities and Exchange Commission with addressing "economic evils resulting from uncoordinated and unintegrated public utility holding company systems"[5] (known as trusts) by controlling their corporate structures.[6] Part II tasked FERC with regulating the interstate sales and service provided by the power trusts' local operating companies (the IOUs), and in particular neutralizing the privileges provided to them by states and abused by the power trusts.

The ascendancy of the power trusts followed states' decisions in the early twentieth century to grant IOUs market power. Public utility laws, which arose in-part "out of the interests of incumbent [IOUs] in protecting their industry from competition,"[7] empowered state regulators to control entry into the nascent electricity industry.[8] In general, regulators concluded that the dominant local provider should enjoy monopoly privileges because allowing firms to provide competing service would harm consumers who benefited from a single company capturing economies of scale. By preventing non-utility investment, regulators effectively sanctioned exclusive utility service territories that enabled IOUs to dominate the rapidly growing power industry.[9]

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3. Gulf States Utilities Co. v. FPC, 411 U.S. 747, 758 (1973); North Am. Co. v. SEC, 327 U.S. 686, 703 n.13 (1946) (quoting Report of the National Power Policy Committee on Public-Utility Holding Companies, H.Doc. 137, 74th Cong., 1st Sess., p. 5) [hereinafter NPPC Report] (power trusts were motivated "by a desire for size and the power inherent in size"); *Re Dairyland Co-Op*, 37 F.P.C. 12, at p. 15 (1967) ("The purpose of that legislation was most clear: it was designed to prevent the notorious investment and profit abuses which had developed in the industry under the domination of the holding companies.").

4. *Gulf States Utilities Co.*, 411 U.S. at 758; Remedying Undue Discrimination through Open Access Transmission Service and Standard Electricity Market Design, Notice of Proposed Rulemaking, 67 Fed. Reg. 55,452 at P 100 (Aug. 29, 2002) [hereinafter SMD NOPR] ("The primary purposes of the Federal Power Act are to curb abusive practices by public utilities and to protect customers from excessive rates and charges.").

5. *North Am. Co.*, 327 U.S. at 706 (1946); *see also id.* at 703 n.13 (quoting NPPC Report, *supra* note 3) (summarizing federal investigations that revealed that the growth of utility holding companies was often "attained with the great waste and disregard of public benefit" and was "actuated primarily by a desire for size and the power inherent in size").

6. *Id*. at 706.

7. Lynne Kiesling & Adrian T. Moore, *Movin' Juice: Making Electricity Transmission More Competitive*, REASON FOUND. (Sept. 1, 2003), https://reason.org/wp-content/uploads/2003/09/40989a8a7676e2409eb4951655cc0dcd.pdf (citing Vernon Smith, *Regulatory Reform in the Electric Power Industry*, 1 REGULATION 33 (1996) and Gregg Jarrell, *The Demand for State Regulation of the Electric Utility Industry*, J. L. & ECON., at 269-95 (Oct. 1978)).

8. *See* William K. Jones, *Origins of the Certificate of Public Convenience and Necessity: Developments in the States, 1870–1920*, 79 COLUMBIA L. REV. 426 (1979).

9. Initially, exclusivity was governed by the IOUs' franchises granted by the state or municipalities, and, in many states, franchises were legally required to be non-exclusive. Paul L. Joskow, *Mixing Regulatory and Antitrust Policies in the Electric Power Industry: The Price Squeeze and Retail Market Competition*, ANTITRUST

IOUs financed system expansion through state-regulated rates that tied IOU profits to the amount of money they invested in physical assets, such as power plants and transmission lines.[10] The combination of exclusive service territories and administrative ratemaking minimized investment risks, allowing IOUs to cheaply finance new infrastructure. The states' regulatory model was designed to maximize local service. Locally based IOUs with local service territories collected revenue from local ratepayers to build local infrastructure needed to meet growing local demand.

But with power trusts pulling the strings, IOUs became ensnared in multi-state holding companies controlled by out-of-state investors. The corporate groupings were tied more to "promoters' dreams of far-flung power and bankers' schemes for security profits" than consumers' needs or economically efficient operations.[11] State regulators faced practical and legal barriers to reining in the power trusts and controlling the interstate expansion and transactions of the entities that they had nurtured.[12]

In the 1935 Act, Congress sought to remedy the power trusts' inefficient management by subjecting their operating companies to federal oversight and tasking FERC with encouraging efficient coordination.[13] The industry and Congress un-

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AND REGULATION: ESSAYS IN MEMORY OF JOHN J. MCGOWAN 178–79 (1985). Litigated cases from the 1930s highlight that IOUs in many states had non-exclusive franchises. *See, e.g.,* Tenn. Electric Power Co. et al. v. Tenn. Valley Auth. et al., 306 U.S. 118, 138 (1939). Eventually, nearly all states passed laws that established exclusive territories for IOUs. David C. Hjelmfelt, *Exclusive Service Territories, Power Pooling and Electric Utility Regulations*, 38 FED. B.J. 21 n.1 (1979) (stating that forty states had established utility service territories by statute).

10. William Boyd, *Public Utility and the Low-Carbon Future*, 61 UCLA L. REV. 1614, 1643 (2014).

11. *North Am. Co.*, 327 U.S. at 703 n.13 (quoting NPPC Report, *supra* note 3) (trusts did "no more than pay lip service to the principle of building up a system as an integrated and economic whole . . . Instead, they have too frequently given us massive, over-capitalized organizations of ever-increasing complexity and steadily diminishing coordination and efficiency."); *id.* at 701 ("Public utility holding companies are thereby able to build their gas and electric utility systems, often gerrymandered in such ways as to bear no relation to economy of operation or to effective regulation."); Salt River Project Agric. Improv. & Power Dist. v. FPC, 391 F.2d 470, 475 (D.C. Cir. 1967) (noting that the Federal Trade Commission (FTC) conducted a seven-year investigation and "chronicled at length the venal conditions and iniquitous practices" of the holding companies and quoting from the FTC report that "fraud, deceit, misrepresentation, dishonesty, breach of trust, and oppression are the only suitable terms to apply if one seeks to form an ethical judgment on many practices" of the holding companies (quoting Summary Report of the FTC to the Senate, Document 92, Part 73-A, 70th Cong., 1st Sess., p. 63 (1935)); Robert H. Tucker, *The Public Utility Act of 1935: Its Background and Significance*, 4 SOUTHERN ECON. J. 423, 425 ("Arbitrary write-ups of the value of capital assets were wide-spread, and fantastic overheads were capitalized to balance excessive security issues and create seeming surpluses and reserves."). *But see* Thomas P. Hughes, NETWORKS OF POWER: ELECTRIFICATION IN WESTERN SOCIETY, 1880–1930 393 (1993) ("Contrary to popular opinion, the origins and development of several leading electric-utility holding companies are to be found rooted more deeply in technology and management history than in finance.").

12. Jersey Central Power & Light v. FPC, 319 U.S. 61, 67 n.7 (1943) (quoting S. Rep. No. 621, 74th Cong., 1st Sess., p. 17) ("Other features of this interstate utility business are equally immune from State control either legally or practically."); Tucker, *supra* note 11, at 423 (explaining why state regulation proved ineffective at controlling power trusts' abuses); *Section 11(B) of the Holding Company Act: Fifteen Years in Retrospect*, 59 YALE L.J. 1088, 1093 (explaining that "[s]tate regulation proved incapable of dealing with the [] abuses" by interstate holding companies).

13. *North Am. Co.*, 327 U.S. at 703 n.13; *Jersey Central Power & Light*, 319 U.S. at 68 n.7 (quoting S. Rep. No. 621, 74th Cong., 1st Sess., p. 17) ("The new part 2 of the Federal Water Power Act seeks to bring about

derstood that coordinating operations through interconnected transmission networks was more efficient than each IOU operating as an island. While coordination among IOUs brought clear benefits, agreements between IOUs and non-profit utilities (owned by rural cooperatives and municipalities) often reflected the power imbalance between the parties.[14] The so-called transmission-dependent utilities[15] (TDUs) were both IOUs' competitors (in limited respects) and captive wholesale customers that relied on interstate FERC-regulated IOU service to meet the needs of their local distribution customers.[16]

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the regional coordination of the operating facilities of the interstate utilities along the same lines within which the financial and managerial control is limited by title I of the bill.").

14. IOUs also used their control of transmission within their state-granted territories to dominate TDUs within their boundaries or adjacent to their territories. The American Public Power Association summarized in a Supreme Court brief that IOUs:

- "have been at war for many years with the municipalities in their areas which have been struggling to establish publicly owned systems for themselves."
- "frequently refused to interconnect facilities for any purpose."
- "refused to sell bulk power at wholesale to a municipality . . . The reason is too often anticompetitive."
- "frequently wheel power for one another but . . . refuse to wheel power for consumer-owned systems. The purpose is to choke off competition."
- "use the leverage of their monopolistic position to insert 'requirements' provisions in wholesale contracts with municipalities and cooperatives. These anticompetitive restriction, curtail a buyer's future options."

APPA summed up that these and other activities, "viewed in totality, with the realization that the fundamental purpose of the activities is to prevent or stifle competition, [must be seen] as blatantly anticompetitive." Brief of the American Public Power Association (APPA), Supreme Court Docket No. 71-991, Otter Tail Power Co. v. U.S., Sep. 25, 1972. *See also Hearings on the Competitive Aspects of the Energy Industry Before the Subcomm. on Antitrust and Monopoly of the Senate Comm. on the Judiciary,* 91st Cong., 2d Sess., at pp. 378–386, 418–425 [hereinafter Senate Hearings on Antitrust and Monopoly] (APPA manager describing these and other issues, including "exclusion from pooling"); *id.* at 472–476 (Secretary of the Northern California Power Agency detailing "Pacific Gas & Electric Co.'s almost total effort to effectively block small municipalities from obtaining sources of low-cost electric energy" and alleging that the IOU is "using every possible means to control the wholesale power market in northern California in particular, and elsewhere, so that the only source of bulk power available to our cities will be to purchase it from PG&E."); *id.* at 628 (counsel of the National Rural Electric Cooperative Association testifying that IOU companies "can place the cooperatives under intense economic pressures, pirate their consumers, and invade the[ir] territories . . . Some companies have . . . abused their dominant industry position in what has been an apparent effort to drive the cooperatives out of business, and, thereby achieve an even greater degree of dominance. Other companies have engaged in similar territorial and customer pirating tactics . . .").

15. *See* Comments of the Transmission Dependent Utility Systems, FERC Docket No. AD12-9 (Mar. 29, 2012) ("While some of the TDU Systems own substantial transmission facilities, all of them rely on the transmission systems of neighboring investor-owned public utility transmission owners regulated by the Commission in order to move their power supplies to their member distribution cooperatives' loads.").

16. Rival utilities may have competed to serve an industrial customers considering building new facilities or to provide service to "fringe" customers located on the edge of defined service territories. At the bulk power level, utilities competed to serve smaller utilities that relied on transmitted power to serve their customers. FERC, Office of Electric Power Regulation, *Power Pooling in the United States*, 63–65 (Dec. 1981) [hereinafter Power Pooling in the U.S.] (outlining four distinct types of retail competition: franchise, yardstick, fringe area, serving new large loads; and also describing wholesale competition); PAUL L. JOSKOW AND RICHARD SCHMALENSEE, MARKET FOR POWER: AN ANALYSIS OF UTILITY DEREGULATION 20–23 (1983) (describing fringe area, franchise, and yardstick competition and competition to serve new industrial loads as well as for wholesale bulk power supplies).

Congress required FERC to grapple with this tradeoff between efficiency-enhancing voluntary IOU coordination and anti-competitive IOU behavior toward their customers and competitors.[17] Section 202 of the FPA directs regulators to "promote and encourage voluntary interconnection and coordination" among utilities.[18] It reflects Congress's belief at the time that coordination among the industry's largest private actors, rather than "limited competition"[19] between them, was the best option for improving industry performance.[20] But Congress also tasked FERC with restraining IOU coordination it finds "unjust and unreasonable" or "unduly discriminatory,"[21] broad standards that FERC eventually understood to encompass consideration of anticompetitive IOU behavior.[22]

Congress split FERC's authority to review utility rates and contracts into two sections. Section 205 of the FPA compels IOUs to file all agreements and tariffs for FERC-jurisdictional interstate service and empowers FERC to investigate whether each filing is just and reasonable and not unduly discriminatory.[23] To approve a filing, FERC need not conclude that the agreement or tariff is optimal and must reject the filing only if it finds it inconsistent with the statute's imprecise ratemaking standards.[24] Section 206 instructs FERC to respond to complaints alleging that an agreement or tariff is unjust and unreasonable or unduly discriminatory, and allows it to initiate its own investigations into IOU agreements and tariffs.[25] To force an IOU to modify an agreement or tariff, FERC must meet a

17. *See, e.g.,* FERC, Inquiry Concerning Alternative Power Pooling Institutions Under the Federal Power Act, 59 Fed. Reg. 54,851, 54,852 (Nov. 2, 1994) ("[W]e must consider whether we are appropriately balancing our dual objectives of promoting coordination and competition.").

18. 16 U.S.C. § 824a(a).

19. Gulf States Utilities Co. v. FPC, 411 U.S. 747, 759 (1973).

20. Central Iowa v. FERC, 606 F.2d 1156, 1162 (D.C. Cir. 1979) ("Congress has decided, as a matter of general policy, that power pooling arrangements, rather than unrestrained competition between electric facilities, are in the public interest."); *Id.* at 1163 ("In enacting [] section [202(a)], Congress was 'confident that enlightened self-interest will lead the utilities to cooperate . . . in bringing about the economies which can alone be secured through . . . planned coordination.'" (quoting S. Rep. No. 621, 74th Cong., 1st Sess. 49 (1935))).

21. The Supreme Court has understood that FERC's promotion and encouragement is constrained by an obligation to "consider . . . anticompetitive effects" of coordination. *Gulf Utilities Co*., 411 U.S. at 758–59.

22. *Id.*; FPC v. Sierra Pacific Power Co., 350 U.S. 348, 355 ("the purpose of the power given the Commission by s. 206(a) is the protection of the public interest, as distinguished from the private interests of the utilities"); Otter Tail Power Co. v. U.S., 410 U.S. 366, 373 (1973) ("[T]he history of Part II of the Federal Power Act indicates an overriding policy of maintaining competition to the maximum extent possible consistent with the public interest."); *see also* Joel Eisen, *FERC's Expansive Authority to Transform the Electric Grid*, 49 U.C. DAVIS L. REV. 1783, 1799–1802 (summarizing the history of undue discrimination).

23. Section 205 prohibits an IOU from making or granting any undue preference or advantage to any person or subjecting any person to any undue prejudice or disadvantage. *See* 16 U.S.C. § 824d. It does not include the phrase "unduly discriminatory." That term is in section 206. For simplicity, I use the term "unduly discriminatory" throughout as shorthand and treat the standards in 205 and 206 as if they are identical.

24. Morgan Stanley Capital Grp. Inc. v. Pub. Util. Dist. No. 1 of Snohomish Cty., 554 U.S. 527, 532 (2008) ("'just and reasonable' is obviously incapable of precise judicial definition") (citations omitted); Wis. Pub. Power v. FERC, 493 F.3d 239, 260 (D.C. Cir. 2007) (a party opposing FERC's section 205 finding must "show that the Commission's choices are unreasonable and its chosen line of demarcation is not within a zone of reasonableness as distinct from the question of whether the line drawn by the Commission is precisely right") (citation omitted).

25. 16 U.S.C. § 824e.

"dual burden."[26] First, FERC must demonstrate that the existing agreement or tariff fails to meet the FPA's standards.[27] Second, FERC must find that the proposed changes to the tariff or agreement are just and reasonable and not unduly discriminatory.[28]

For decades, FERC routinely approved IOU-to-IOU coordination agreements under section 205 that reinforced IOU dominance, overlooking IOUs' "systemic anticompetitive behavior"[29] that impeded competition in wholesale power. FERC changed course in the mid-1990s. Rather than relying on the "self-interest" of IOUs to coordinate voluntarily in a manner that would benefit consumers,[30] FERC sought to harness competitive wholesale electricity markets to improve the industry's performance. FERC recognized, however, that "the single greatest impediment to competition" is IOUs' "market power through control of transmission."[31] To address this barrier to competition, FERC ordered each IOU to provide its customers and its own power marketing businesses with comparable transmission service. FERC also required IOUs to publish real-time transmission system conditions in order to mitigate IOUs' informational advantages. Alongside these section 206 mandates, FERC developed a market-based rate regime for jurisdictional power sales under section 205 that allowed suppliers to apply for permission to sell power free from FERC's traditional oversight. Together, FERC's Open-Access mandate and approval of market-based rates facilitated the creation of competitive markets for wholesale power.

Both developments are rooted in FERC's authority to define, detect, and address market power.[32] FERC determined that market-based rates are just and reasonable when "neither buyer nor seller has significant market power."[33] Rather than evaluating whether a utility's rates are "sufficient to assure confidence in the

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26. FirstEnergy Servs. Co. v. FERC, 758 F.3d 346, 353 (D.C. Cir. 2014).

27. *Id*.

28. *Id.*

29. *See* Transmission Access Policy Group v. FERC, 225 F.3d 667, 684 (D.C. Cir. 2000) (upholding Order No. 888 and summarizing that FERC found "systemic anticompetitive behavior" by IOUs).

30. *See supra* note 20.

31. FERC, Proposed Rule, Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities, Recovery of Stranded Costs by Public Utilities, 60 Fed. Reg. 17,662, 17,664 (Apr. 7, 1995) [hereinafter Order No. 888 NOPR]; FERC, Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities, Recovery of Stranded Costs by Public Utilities, 61 Fed. Reg. 21,540, 21,546 (May 10, 1996) [hereinafter Order No. 888] ("The most likely route to market power in today's electric utility industry lies through ownership or control of transmission facilities. Usually, the source of market power is dominant or exclusive ownership of the facilities."); James E. Meeks, *Concentration in the Electric Power Industry: The Impact of Antitrust Policy*, 72 COLUMBIA L. REV. 64, 87 (1972) ("the monopoly over transmission by vertically integrated systems presents the most serious obstacle to potential competition.").

32. *See, e.g.,* Order No. 697, Market-Based Rates for Wholesale Sales of Electric Energy, Capacity, and Ancillary Service by Public Utilities, 119 F.E.R.C. ¶ 61,295, at P 397 (2007) (summarizing that market-based rate authority is contingent on FERC findings about "whether the seller and its affiliates have transmission market power or whether they can erect other barriers to entry").

33. Tejas Power Corp. v. FERC, 908 F.2d 998, 1004 (D.C. Cir. 1990); *see also* Morgan Stanley Capital Grp Inc. v. Pub. Util. Dist. No. 1 of Snohomish Cty., 554 U.S. 527, 537 (2008); California Ex. Rel. Lockyer v. FERC, 383 F.3d 1006 (9th Cir. 2004); Montana Consumer Counsel v. FERC, 659 F.3d 910 (9th Cir. 2011); FERC Order No. 697, 119 F.E.R.C. ¶ 61,295 (2007).

financial integrity of the enterprise,"[34] as it did under cost-of-service regulation, FERC inquires "whether an individual seller is able to exercise anticompetitive market power"[35] before sanctioning market-based rates under section 205. Step-by-step, as FERC advanced its market-based rate regime, it has consistently emphasized the central importance of exposing and mitigating market power.[36]

Similarly, FERC predicated its Open-Access mandate on its conclusion that transmission-owning IOUs "possess substantial market power [and] as profit maximizing firms, they have and will continue to exercise that market power in order to maintain and increase market share."[37] In response to that finding, FERC changed the focus of its analysis under sections 205 and 206. Historically, FERC considered transmission discrimination on a customer-by-customer basis, and it might find service to be unduly discriminatory if the IOU provided markedly different service to similar transmission customers.[38] With its new focus on IOU market power, FERC compared the service IOUs provided for their own power marketing businesses with the service they provided to third parties.[39] With that understanding of undue discrimination, FERC concluded on a generic basis that IOUs have incentives and abilities to unduly discriminate against their customers and competitors by offering inferior service or planning system expansion based on their own needs and parochial interests.

Transmission dominance is my shorthand for this foundational finding that all IOUs have abilities and incentives to operate and plan transmission for their benefit and to the detriment of their competitors. In FERC's Open-Access orders, IOU transmission dominance overlaps with IOU "market power." FERC concluded that IOU control over transmission allowed them to exclude potential competitors and charge uncompetitive prices, two hallmarks of the exercise of market

34. FPC v. Hope Nat. Gas Co., 320 U.S. 591, 603 (1944).

35. Blumenthal v. FERC, 552 F.3d 875, 882 (D.C. Cir. 2009); *see also Lockyer*, 383 F.3d at 1013.

36. Order No. 2000, Regional Transmission Organizations, 89 F.E.R.C ¶ 61,285, at pg. 190 (1999) (explaining that "the Commission has the primary responsibility to ensure that regional wholesale electricity markets . . . operate without market power" and tasking market operators with identifying and reporting "market power abuses"); 18 C.FR. § 35.34 (requiring RTOs to "provide for objective monitoring . . . to identify . . . market power abuses . . . "); *PJM Interconnection*, 110 F.E.R.C .¶ 61,053, at P 25 (2005) (approving locational marginal pricing (LMP) as the price-setting mechanism in part because LMPs provide "generators *that lack market power* [with] an incentive to submit bids at their marginal costs"); *PJM Interconnection*, 117 F.E.R.C ¶ 61,331, at P 6 (2006) (approving a settlement that resulted in the creation of the PJM capacity auction whose "design features that [] the exercise of market power" and that aimed to "provide fewer incentives for sellers to exercise market power"). FERC has approved numerous market power mitigation measures. *See, e.g.,* Edison Mission Energy v. FERC, 394 F.3d 964 (D.C. Cir. 2005); Wisconsin Public Power v. FERC, 493 F.3d 239 (D.C. Cir. 2007). FERC regularly investigates market power under section 206. *See, e.g., Nevada Power Co., et al.*, 155 F.E.R.C. ¶ 61,249 (2016); *Idaho Power Co.*, 168 F.E.R.C. ¶ 61,156 (2019).

37. Order No. 888 NOPR, *supra* note 31, at 17,665; *see also id.* at 17,664; *Citizens Power & Light Corporation*, 48 F.E.R.C. ¶ 61,210, at p. 61,777 (1989) ("The most likely route to market power in today's electric utility industry lies through ownership or control of transmission facilities. Usually, the source of market power is dominant or exclusive ownership of the facilities.").

38. Eisen, *supra* note 22, at 1808.

39. Order No. 888, *supra* note 31, at 21,548 (citing *Am. Elec. Power*, 67 F.E.R.C. ¶ 61,317, at p. 61,489 (1994)); Eisen, *supra* note 22, at 1814–1817.

power.[40] But, as I describe below, its subsequent transmission planning rules do not rest on similar findings about IOU market power. Rather, FERC's section 206 findings are premised on theoretical threats to the justness and reasonableness of rates due to IOUs' abilities to unduly discriminate against non-IOUs in planning system expansion. Because this more expansive notion of IOU transmission dominance persists, FERC has unexercised authority under section 206 to separate IOUs from transmission decisionmaking or take other remedial actions that aim to neutralize IOUs' unearned advantages.[41]

The Open-Access mandate marked two fundamental shifts in how FERC wields its authority. To remedy IOUs' unduly discriminatory transmission service, FERC specified minimum terms and conditions that all regulated transmission owners or operators (also known as providers) must include in their transmission tariffs.[42] This industry-wide mandate was a sharp departure from FERC's prior utility-by-utility approach under section 206. In subsequent orders, FERC required transmission providers to amend their so-called Open-Access Transmission Tariffs (OATTs) to address whatever IOU conduct FERC found to be unjust and unreasonable or unduly discriminatory. These minimum terms and conditions in the OATT, established through rulemakings, set the standard against which FERC evaluates a complaint filed under section 206, a section 205 transmission tariff filing, or a comment in any proceeding about a transmission tariff. FERC's inquiry focuses on whether the transmission provider is complying with the relevant rulemakings,[43] rather than whether the provider's conduct meets some bespoke notion of unjust and unreasonable or unduly discriminatory that a complainant or commenter has crafted for that proceeding.

Alongside its bold shift to aggressively wielding its section 206 authority, FERC transformed how it encourages voluntary coordination under section 202. Its prior approach relied on IOUs developing ad-hoc agreements that could include a range of coordination activities, from merely conferring about certain seasonal activities or long-term planning to jointly operating their interconnected systems

40. In general, market power refers to the ability to charge uncompetitive prices or exclude competition. Hempling, *supra* note 2, at 29 (quoting U.S. v. E.I. du Pont de Nemours & Co., 351 U.S. 377, 391 (1956) and Dept. of Justice and Fed. Trade Comm'n, Horizontal Merger Guidelines § 1.1 (1992, rev. 1997)).

41. *See* South Carolina Pub. Serv. Authority v. FERC, 762 F.3d 41, 57–69 (D.C. Cir. 2014) (upholding Order No. 1000 in part due to the FPA's "broadly stated" authority to remedy anti-competitive practices even where FERC's action is premised on a "theoretical threat" to just and reasonable rates, such as the absence of competition); Transmission Access Policy 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").

42. Order No. 888, *supra* note 31, at 21,541.

43. *See, e.g., Cent. Power & Light Co., et al.,* 87 F.E.R.C. ¶ 61,001, at p. 61,002 (1999) (rejecting request in a section 205 proceeding that FERC add a provision to the tariff at issue about joint transmission planning because "[i]n Order No. 888-A, the Commission decided not to mandate joint planning"); *Monongahela Power, et al.*, 164 F.E.R.C. ¶ 61,217, at P 31 (2018) (rejecting reforms suggested by market participants in a section 205/206 proceeding because "[t]he PJM Transmission Owners are required only to meet the requirements of Order No. 890, not exceed them."); *TranSource LLC v. PJM Interconnection*, 168 F.E.R.C. 61,119, at P 81 (2019) (rejecting complainants' claim about system impact studies in part because Order No. 890 does not apply to such studies and therefore the "transparency" principle mandated by the order is inapplicable); *GridLiance High Plains*, 174 F.E.R.C. ¶ 61,078 (2021) (rejecting transmission planning proposal as inconsistent with definitions in Orders No. 890 and 1000).

on a minute-to-minute basis.[44] Beginning in the 1990s, FERC endorsed particular types of coordination agreements that would be consistent with its anti-transmission dominance agenda and outlined how it would evaluate joint utility filings under section 205. FERC's guidance encouraged utilities to create new organizations that are "independent" from IOUs themselves and directly regulated by FERC pursuant to sections 205 and 206. By allowing for the creation of these independent entities, FERC aimed to restructure the industry in order to free the nation's bulk power system from IOU control.

FERC's reforms over the past three decades have standardized its approach to policing IOU transmission dominance. To address its generic conclusion that all IOUs have abilities and incentives to unduly discriminate, FERC required all IOUs to file OATTs that contain specified terms and conditions. FERC implements industry-wide reforms by imposing new terms and conditions in OATTs and justifies those reforms by pointing to a systemic problem in operations or planning tied to IOUs' abilities to act anti-competitively. As I explain in the following sections, two principles animate FERC's reforms: transmission providers must 1) provide comparable service to all parties, and 2) publish commercially relevant information. FERC ensures that transmission service meets the FPA's ratemaking standards by enforcing compliance with the OATT.

To appreciate FERC's focus on these comparability and transparency principles, I provide a perspective on IOU-to-IOU coordination efforts prior to the Open Access mandate. As I describe in the next section, IOU-to-IOU agreements dulled competition between them, exploited TDUs, thwarted their efforts to compete, and carved up profitable capital investment opportunities. The IOUs' exclusionary approach persisted, even after FERC issued its Open Access mandate in 1996, as they continued to plan transmission expansion within their exclusive clubs, allowing them to withhold information from potential competitors and develop interstate networks for their own needs.[45]

II. THE GOLDEN AGE OF IOU DOMINANCE: FERC FAVORS VOLUNTARY COORDINATION UNDER SECTION 202 OVER POLICING IOU COLLUSION UNDER SECTIONS 205 AND 206

Transmission "is the heart of a modern electric power system."[46] It is the medium for coordinating supply and demand that enables the industry to unlock

44. FEDERAL POWER COMMISSION, 1970 NATIONAL POWER SURVEY at I-17-1 (1972) ("There are thousands of arrangements among systems from all segments of the industry providing for various degrees and methods of electrical coordination.") [hereinafter 1970 NATIONAL POWER SURVEY]. The FPC characterized its 1964 National Power Survey "as the most effective means of carrying out the provisions of section 202(a)." FEDERAL POWER COMMISSION, 1964 NATIONAL POWER SURVEY at 1 (1964) [hereinafter 1964 NATIONAL POWER SURVEY] . The Report provided "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." The "heart of the report" describes an illustrative plan for "progressive enlargement of geographical areas of coordination." 1964 NATIONAL POWER SURVEY at II, 6, 199.

45. *See infra* notes 271–276 and accompanying text.

46. JOSKOW, *supra* note 16, at 63.

short-run and long-run efficiencies through trading and joint planning.[47] Because of transmission's "strategic importance,"[48] transmission-owning IOUs were able to dominate smaller transmission-dependent utilities and restrain the development of non-IOU generation.[49] Agreements among IOUs created "information cartels"[50] that colluded against their customers and potential competitors and impeded

47. *Id.* at 64 (outlining efficiencies that utilities can unlock through coordination via transmission); *New England Power Pool Agreement*, 48 F.P.C. 538, at p. 549 (1972):

> The satisfactory performance of a power supply network requires close cooperation among component systems for accurate control of frequency, sharing of load regulating responsibility, and maintenance of power system stability. Financial benefits are often realized from staggered construction of large generating units, short-term capacity transactions, and interchanges of economy energy. Reduction of installed reserve capacity is made possible by mutual emergency assistance arrangements and associated coordinated transmission planning. Bulk power supply reliability is enhanced by interconnection agreements covering spinning reserves, reactive kilovolt-ampere requirements, emergency service, coordination of day-to-day operations, and coordination of maintenance schedules. Also, operating costs may be reduced through coordinated operation of interconnected systems. Electric utilities, which are unable individually to construct and take full advantage of large bulk power supply facilities, are able to obtain economic and operational benefits from such facilities, *inter alia*, by joining with neighboring systems in coordination arrangements.

48. 1964 NATIONAL POWER SURVEY, *supra* note 44, at 27 ("The strategic importance of transmission is much greater than indicated by its 10 percent average share in the overall cost of electricity. . . . Interconnection is the coordinating medium that makes possible the most efficient use of facilities in any area or region."); Inquiry Concerning the Commission's Merger Policy Under the Federal Power Act; Policy Statement, 61 Fed. Reg. 68,595, 68,610 (Dec. 30, 1996) ("Limitations on available transmission capability that prevent competitors from participating in a market can give substantial market power to incumbents in the market"); *Extra-High-Voltage Electric Transmission Lines: Hearings Before the Comm. on Commerce,* 89th Cong. 14–15 (1966) (statement of FPC Comm'r Ross, member, Comm. on Commerce) ("[I]t is no longer the parties who control generation that control the industry--it is the parties who control the transmission, the arteries of the Industry, that control the destiny of the millions of rate payers of this Nation."); LEONARD W. WEISS, ANTITRUST IN THE ELECTRIC POWER INDUSTRY IN PROMOTING COMPETITION IN REGULATED MARKETS 135, 144–45 (Almarin Phillips ed. 1975) ("The ownership of transmission lines can be used to impose more monopoly in generation or more vertical integration on the power industry, or both, than is technically necessary.").

49. *See, e.g.,* New York v. FERC, 535 U.S. 1, 8 (2002) ("The utilities' control of transmission facilities gives them the power either to refuse to deliver energy produced by competitors or to deliver competitors' power on terms and conditions less favorable than those they apply to their own transmissions."); FERC, Policy Statement: Inquiry Concerning the Commission's Merger Policy Under the Federal Power Act, 61 Fed. Reg. 68,595 at p. 68,616 (Dec. 30, 1996) ("A merger of transmission-owning utilities may have various effects on the grid, such as better planning, coordination, fewer pancaked rates, and *strategic control of regional transmission grids*. (emphasis added)); *Ohio Edison Co., et al.*, 81 F.E.R.C. ¶ 61,110, at p. 61,408 (1997) (noting potential for merged utility company's "ability to strategically plan and operate its transmission system to withhold generation"); *Am. Elec. Power Co. et al.*, 90 F.E.R.C. ¶ 61,242, at p. 61,785 (2000) (discussing how merged utility might "use transmission to frustrate competitor's access to relevant electricity markets" by "foreclosing competitor's access to [] transmission"); Narasimha Rao and Richard D. Tabors, *Transmission Markets: Stretching the Rules for Fun and Profit*, 13 ELEC. J. 1 (Jun. 2000) (explaining how IOUs that cover large territories and are also NERC security coordinators "control all the knobs" of the transmission network and are able to restrict access, even under FERC's open-access rules); CARL PECHMAN, REGULATING POWER: THE ECONOMICS OF ELECTRICITY IN THE INFORMATION AGE 100 (1993) ("Utilities have tremendous power over non-utility generators. The basis of this power is that the monopoly privileges granted utilities have allowed them to control access to both retail markets and the bulk power system . . . . The local utility is both a monopoly provider of back-up service . . . as well as a monopsonist when it comes to purchasing power . . . .").

50. Pechman, *supra* note 49, at 67–70 (describing power pools as "information cartels"); James Meeks, *Antitrust Concerns in the Modern Public Utility Environment*, NAT'L REGULATORY RESEARCH INST. (Apr. 1996), https://inis.iaea.org/collection/NCLCollectionStore/_Public/27/066/27066557.pdf?r=1&r=1:

oversight. Regionalizing decisionmaking also enabled IOUs to cartelize development of generation and transmission infrastructure, reinforcing their dominance over the power industry.

Since the 1920s, IOUs routinely connected to each other via transmission lines, initially to provide backup power during outages at their own facilities and share resources in order to economically meet peak consumer demand.[51] Agreements also provided for exchange of so-called economy energy when one utility had energy available at a cost that would reduce the other utility's expenses by displacing more expensive generation on its own system.[52] Most IOU-to-IOU interconnection agreements were premised on "mutuality of benefits," and many services were returned in-kind.[53] Large IOUs preferred to connect to each other, in part because of "decades of intra-industry animosities"[54] between IOUs and

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> exchange of information can raise antitrust problems to the extent that it can facilitate overt or tacit price collusion. . . . It seems clear here that some possibility of misuse of the information to facilitate a restraint of trade is tolerable given the strong public benefit of such joint activity. However, any exchange that exceeds the need presented by the justification will put the joint venture in jeopardy. This seems especially critical given the likely market structure in parts of these industries and the accompanying strong possibility of tacit or oligopoly pricing.

Peter C. Carstensen, *Creating Workably Competitive Wholesale Markets in Energy: Necessary Conditions, Structure, and Conduct*, 85 ENVTL. AND ENERGY L. & POLICY J. 85, 105 (2006) ("Markets with few competitors are prone to tacit or explicit collusion . . . Successful collusion is much more feasible when there are only a handful of firms that must cooperate to exploit the market"); *Id.* at 132 (observing that in the electric power industry the need for agreement about technical specifications "provides fertile ground for the parties to engage in [] tacit collusion and to adopt unduly exclusionary or exploitative regulations"); Robert H. Lande and Howard P. Marvel, *The Three Types of Collusion: Fixing Prices, Rivals, and Rules*, 2000 WISC. L. REV. 941, 942 (finding that in some cases "collusion . . . permitted firms to manipulate the rules under which the independent decisions of the colluding firms were made. . . . [Firms] competed less vigorously or in a restricted manner in the environment their collusion had altered. . . . The most straightforward examples of this type of collusion involve efforts to soften competition among rivals by limiting the information available to consumers.").

51. JULIE A. COHN, THE GRID (2017); THOMAS P. HUGHES, NETWORKS OF POWER: ELECTRIFICATION IN WESTERN SOCIETY, 1880–1930 363 (1993); *See also* 1970 NATIONAL POWER SURVEY, *supra* note 44, at I-17-1; U.S. DEP'T OF ENERGY, ECONOMIC REGULATORY ADMINISTRATION, OFFICE OF UTILITY SYSTEMS, DOE/ERA 56-2, THE NATIONAL POWER GRID STUDY: VOLUME II TECHNICAL STUDY REPORTS 153 (1979) [hereinafter 1979 NATIONAL POWER GRID STUDY].

52. Power Pooling in the U.S., *supra* note 16, at 34; 1964 NATIONAL POWER SURVEY, *supra* note 44, at 29; *See, e.g., Jersey Cent. Power & Light*, 4 F.P.C. 554 (1944) (noting that two IOUs traded "Economy Energy" since 1931); Regulation of Electricity Sales-for-Resale and Transmission Service, 50 Fed. Reg. 23,445, 23,446–47 n.7 (Jun. 4, 1985) ("Economy energy is unconditionally interruptible energy supplied during a period, usually one hour, when the seller's incremental energy cost is less than the buyer's decremental energy costs").

53. Abraham Gerber, *Power Pools and Joint Plant Ownership*, 82 PUB. UTIL. FORTNIGHTLY 23, 26–29 (Sep. 12, 1968) (outlining how small systems reap seven types of benefits from interconnecting with large systems and arguing that because there is no "mutuality of benefits" small systems should pay large utilities for those benefits).

54. 1964 NATIONAL POWER SURVEY, *supra* note 44, at 275 (noting that "psychological barriers" stand in the way of coordination and observing that municipal and cooperative utilities "distrust" IOUs and are therefore "hesitant to sacrifice any of their autonomy by purchasing power from" IOUs); *see also* PHILIP SPORN, THE SOCIAL ORGANIZATION OF ELECTRIC POWER SUPPLY IN MODERN SOCIETIES (1971) (arguing that IOUs are superior to publicly owned power systems); 1979 NATIONAL POWER GRID STUDY, *supra* note 51, at 49 ("Investor-owned systems tend to regard public systems as having an unfair advantage because of the difference in financial structure, and they are often reluctant to assist the public utilities by wheeling less expensive public power."); *In the Matter of Alabama Power*, 5 N.R.C. 804, 946–957 (1977) (recounting efforts by southeastern IOUs to develop coordination agreements in the late 1960s and finding that Alabama Power's "conduct with respect to deterring,

TDUs. In addition, IOUs believed that coordinating with small utilities offered few, if any, economic or reliability benefits.[55]

To exchange power, utilities must share information in order to maintain electrical stability over their connected systems.[56] Supply and demand must be in balance, and the voltage, frequency, and other operating parameters of the shared system must remain within safe limits.[57] Bilateral connection agreements between IOUs typically established a committee of employees that coordinated operations.[58] IOUs shared information about generator availability and costs, transmission capacity, and other technical and economic factors.[59]

More sophisticated coordination arrangements entail greater information sharing. Regional, multi-IOU "power pools" facilitated varying levels of cooperation and coordination.[60] Pool agreements might have committed IOUs to rendering emergency assistance, prescribed for each IOU an amount of reserve capacity, or standardized terms and conditions of economy energy exchanges.[61] In the Northeast and Michigan, IOUs developed so-called "tight" power pools, where each IOU ceded dispatch of its power plants to the jointly managed pool in order to meet aggregate demand with the least-cost mix of generation resources across the pool.[62] Elsewhere, holding companies that owned contiguous IOUs similarly coordinated operations through joint dispatch.[63] Implementing these coordinated

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discouraging and excluding publicly owned utilities from economic coordination in this matter is consistent with the anticompetitive attitude of the Southern System . . . Applicant clearly intended to, and did, deny in concert with other utilities, publicly owned utilities in its service area the benefits of economic coordination in order to eliminate competition from them.").

55. Power Pooling in the U.S., *supra* note 16, at 39–40. Some IOUs believed that they should receive a share of a small utility's savings that it would derive from the IOU pool. *Id. But see* Gainesville Utilities Dep't v. Florida Power Corp., 402 U.S. 515, 526 (noting FERC's findings that the IOU would benefit from connecting to the municipal utility).

56. HUGHES, *supra* note 51, at 368–71 (observing that with the development in the 1920s of multi-utility regional systems, "electrical engineers began working out a science of information and control . . . [and] increasingly used concepts such as 'coordination,' 'integration,' 'control,' 'flow,' 'concentration,' 'centralization,' and 'rationalization.'").

57. *See supra* note 47; ALEXANDRA VON MEIER ELECTRIC POWER SYSTEMS: A CONCEPTUAL INTRODUCTION 260–268 (2006) (summarizing that the "prime directive" for system planners and operators is to balance supply and demand and explaining that this balancing act "occurs on multiple levels, with control methods appropriate to each time scale").

58. *See, e.g., Re Pub. Serv. Co. of Ind.*, 34 F.P.C. 1513, at p. 1516 (1965); Power Pooling in the U.S., *supra* note 16, at 33.

59. *See* Pechman, *supra* note 49, at 62–67 (describing the operations of the New York Power Pool); Meeks, *Antitrust Concerns*, *supra* note 50, at 81 ("This pooling requires . . . exchange of information regarding costs of production . . . and coordinated monitoring of line flow and power movements to maintain reliability and the security of the participating systems"); Power Pooling in the U.S., *supra* note 16, at 27–31; 1970 NATIONAL POWER SURVEY, *supra* note 44, at I-17-4 ("In more highly developed pools, the day-to-day operation, maintenance, and accounting may be handled by a pool manager and other full-time personnel.").

60. 1970 NATIONAL POWER SURVEY, *supra* note 44, at I-17-4, I-17-22.

61. *See, e.g.*, *Pub. Serv. Co. of Ind.*, 31 F.P.C. 1064, at p. 1065 (1964); Curtis Cramer and John Tschirhart, *Power Pooling: An Exercise in Industrial Coordination*, 59 LAND ECON. 24, 31 (Feb. 1983); Power Pooling in the U.S., *supra* note 16, at 33–38 (describing various power pool arrangements).

62. Cramer and Tschirhart, *supra* note 61, at 32.

63. *See, e.g.,* 1970 NATIONAL POWER SURVEY, *supra* note 44, at I-17-5–7 (noting that the following utility holding companies managed power pools of member companies: American Electric Power, Allegheny Power

arrangements required a constant flow of information from IOUs to pool-assigned staff about generation and transmission availability, consumer demand, and energy transfers into and out of the pool.[64] To facilitate seamless energy trading and capacity sharing, pool agreements set uniform terms and conditions for the use of each pool member's separately owned transmission assets.[65]

Shared information, along with pool rules for dispatching plants and allocating costs, ultimately determined the cost of power and IOU profits.[66] IOU-led dispatch prioritized member plants over non-members' generators.[67] Cost allocation rules could benefit members and make available only higher-cost power to transmission-dependent non-pool members.[68] An IOU-dominated pool could effectively monopolize wholesale power transactions across the region by refusing to transport power from competing generators or blocking TDUs from accessing particular sources of power.[69] By emphasizing cooperation and shared savings, pool dispatch also suppressed competition among IOU pool members.[70]

Long-term planning procedures outlined in pool agreements were premised on IOUs cartelizing infrastructure development.[71] Planning arrangements allowed

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Systems, Southern Company, Middle South Utilities System, and Texas Utilities Systems); *Ark. Power & Light Co.*, 34 F.P.C. 747, at pp. 749–750 (1965) (describing operations of a multi-state power pool controlled by a utility holding company).

64. *Supra* note 59.

65. Power Pooling in the U.S., *supra* note 16, at 35 (noting that the NEPOOL agreement provides a pool-wide transmission rate that is available to all members while PJM does not charge for transmission).

66. *See* Pechman, *supra* note 49, at 67–69.

67. *Id.* at 74 (explaining that by designating certain plants as "must run," IOUs were able to discourage non-pool plants and gain a degree of market control by reducing the number of hours in which independent plants can generate power).

68. *See, e.g., Re Pub. Serv. Co. of Okla.*, 25 F.P.C. 656 (1961) (The FPC notes that "many problems and issues presented in an electric rate case involving a mutual exchange of services in a power pooling or interchange arrangement are different from those arising in a rate proceeding involving a one-way service agreement" in part because "problems of classification and allocation of costs [among parties] frequently involve judgment factors." The FPC ultimately approved the filed rates and coordination agreement. The hearing officer found that the "exactly how the rate levels . . . were developed by [the IOU] has never been made completely clear on an arithmetical basis" and noted that the IOU's chairman allocated some of the costs "on the basis of his personal judgment" *Id.* at pp. 696, 699.

69. Pechman, *supra* note 49, at 61–62, 72; *See also* Meeks, *Concentration in the Electric Power Industry*, *supra* note 31, at 108–109, 112–113, 126.

70. Power Pooling in the U.S., *supra* note 16, at 62 ("Coordination may lessen the intensity of rivalry within the industry. The likelihood of collusion or parallel behavior is increased when industry participants come together to make joint planning and operating decisions") (quoting David W. Penn, James B. Delaney, and T. Crawford Honeycutt, Nuclear Regulatory Commission Staff, "Coordination, Competition, and Regulation in the Electric Utility Industry," NUREG-75/061, Jun. 1975); James F. Fairman and John C. Scott, *Transmission, Power Pools, and Competition in the Electric Utility Industry*, 28 HASTINGS L.J. 1159, 1194 (1977) (noting that pooling can remove the "threat of being undersold," reduce price competition and utility incentives to reduce costs).

71. 1979 NATIONAL POWER GRID STUDY, *supra* note 51, at 28 (noting that the "majority of planning which currently takes place is at the power pool level"); 1970 NATIONAL POWER SURVEY, *supra* note 44, at I-17-24 ("Most joint ownership arrangements are among utilities within the same power pool or planning organization."); *see also id.* at I-17-4 n.4 ("Membership of most power pools consists entirely of the larger investor-owned systems" but noting that in New England two publicly owned utilities are pool members); *Mid-Continent Area Power Pool Agreement*, 58 F.P.C. 2622, at p. 2662 (TDUs alleged that the IOU-led pool "controls area-wide planning and has established a club to which small systems contemplating bulk power facilities must come 'hat

IOUs to co-own facilities[72] or take turns building new generators,[73] and enabled a member IOU to grow its load until it could rationalize constructing a plant (and earn a state-set rate of return on that investment).[74] In general, IOUs did not invite non-pool members to jointly develop new power plants.[75] Joint development arrangements were only feasible when compatible with the expansion plans and financial goals of each individual member IOU.[76] Meanwhile, smaller utilities, including most non-profits, were unable to support construction of new generators

in hand.'" FERC did not accept that characterization, but did conclude that membership rules unduly discriminated against smaller utilities and ordered the pool to provide better access to its planning processes. *Id.* at 2622.).

72. 1970 NATIONAL POWER SURVEY, *supra* note 44, at I-17-25 ("A recent development of great significance is the increasing use of joint ownership of facilities by members of formal power pools."). The report notes that 27.6 GW of jointly developed pool capacity would be put in service from 1968 to 1975 and pools had procedures to "utilize joint enterprises on a continuing basis.").

73. 1970 NATIONAL POWER SURVEY, *supra* note 44, at I-17-23 (describing various approaches to "staggered construction," where IOUs take turns building new plants); *Mid-Continent Area Power Pool*, 58 F.P.C. 2622, at p. 2649 (1977) ("Emphasis is placed upon staggered and timely construction of large generating units"); Abraham Gerber, *Power Pools and Joint Plant Ownership*, 82 PUB. UTIL. FORTNIGHTLY 23, 26 (Sept. 12, 1968) (stating that under the Carolina-Virginia (CARVA) power pool agreement, each new baseload unit is built by a single IOU and sized so that load growth on that IOU's system absorbs the excess capacity while other systems purchase the excess capacity during that interval).

74. *Pub. Serv. Co. of Ind.*, 31 F.P.C. 1064, at p. 1067.

75. Small utilities urged the Atomic Energy Commission and the Securities and Exchange Commission to consider antitrust law in its approval of IOUs' nuclear power plant construction applications. *See* City of Statesville v. Atomic Energy Commission, 441 F.2d 962 (D.C. Cir. 1969) (affirming AEC despite complaints from municipalities that they were denied opportunities to participate in an IOU consortium developing a nuclear reactor); Municipal Elec. Ass'n of Mass. v. SEC, 413 F.2d 1052 (D.C. Cir. 1969) (remanding an order approving IOUs' acquisition of stock of two nuclear generating companies because the SEC failed to consider municipal utilities' argument that they must be given an opportunity to obtain the associated low-cost power); *see also* Power Pooling in the U.S., *supra* note 16, at 74 (reporting that NEPOOL management committee determines whether proposed generating units to be installed by members receive "pool-planned" status, which provides beneficial transmission access). By the late 1970s, in-part due to "inflation-caused financing problems for investor-owned systems," some IOUs collaborated with municipal and cooperative utilities in power plant development. Power Pooling in the U.S., *supra* note 16, at 12.

76. Power Pooling in the U.S., *supra* note 16, at 103 ("Staggered construction, jointly owned generating units, and other informal coordination techniques to achieve improved economy can be employed only when they are compatible with the generation expansion plans of individual utilities."); *Id.* at 116 ("Under prevailing pool practices, [MAPP] members develop their individual generation and transmission plans and act independently to identify and implement coordination opportunities with other pool members. Staggered construction, jointly owned generation . . . and other coordinating opportunities . . . are employed to modify individual utility expansion plans so as to further reduce investment and operating costs."); *Id.* at 243 (Letter from the Mid-America Interpool Network stating that the "rights and duties of IOU power systems, among them the right to compete for investment capital and the duties to pay a return to investors . . . have placed some unavoidable restraints on complete power pooling"); *Id.* at 254 (Letter from Southwest Power Pool observing that because full coordination renders only one to three percent savings "one can readily understand why utility executives are reluctant to give up their autonomy"); 1970 NATIONAL POWER SURVEY, *supra* note 44, at I-17-9 (noting that "corporate rate-base requirements" are an obstacle to coordinated planning of new construction and observing that IOU management may be reluctant to "subordinate its individual decisions" over construction to the pool due to corporate preferences for profitable capital investments over cost-saving cooperative agreements and listing other factors).

by themselves,[77] and became increasingly dependent on transmission-owning IOUs to generate and deliver power.[78]

IOU pools were also a mechanism for evading regulatory scrutiny. Pool agreements were beyond the jurisdiction of state regulators. Only FERC could directly regulate their terms, although in practice many IOUs did not file relevant rate schedules with FERC.[79] As an IOU shifted its operations from serving captive ratepayers with its own generation to providing energy to consumers through an

77. 1964 NATIONAL POWER SURVEY, *supra* note 44, at 272; Power Pooling in the U.S., *supra* note 16, at 166.

78. Meeks, *Concentration in the Electric Power Industry*, *supra* note 31, at 68 ("Given the increasing reliance upon wholesale purchases by many of the smaller systems of all three varieties, control over transmission becomes a most important factor in analyzing the wholesale market."); Power Pooling in the U.S., *supra* note 16, at 39–40.

79. Joseph C. Swidler, POWER AND THE PUBLIC INTEREST at 144–18 (2002). The author explains that when he became FPC Chair in 1961 it had been common practice for IOUs not to file wholesale rate schedules, "even if the company in question was part of an interconnected network covering several states," and he sought to require or induce IOUs to file all interstate wholesale rates. Following the Supreme Court's decision in FPC v. Southern Cal. Edison. Co., 376 U.S. 205 (1964), the FPC advised utilities that it would not investigate past failures to file wholesale rate schedules. *Rate Schedules and Public Utilities*, Order No. 282, 31 F.P.C 972 (1964). In its Supreme Court brief, the FPC told the court that ruling in its favor would provide it with clear authority to regulate in-state wholesale sales of utilities participating in power pools. FPC, Brief of the Federal Power Commission, 1963 WL 106064, at *35– 40 (Sep. 3, 1963). In several proceedings initiated shortly after the decision, the FPC found jurisdiction over wholesale sales by IOUs to in-state entities, and found it relevant that the IOU operated as part of an interconnected interstate system. *See Indiana & Michigan Electric Co.*, 33 F.P.C. 739 (1965)*, aff'd,* Indiana & Michigan Elec. Co v. FPC, 365 F.2d 180 (7th Cir. 1966); *Re Arkansas Power & Light Co.*, 34 F.P.C. 747 (1965), *aff'd*, Arkansas Power & Light Co. v. FPC, 368 F.2d 376 (8th Cir. 1966); *Re Public Service Co. of Indiana,* 34 F.P.C. 1513 (1965), *aff'd*, Public Service Co. of Indiana v. FPC, 375 F.2d 100 (7th Cir. 1967); *Re Cincinnati Gas & Electric Co.*, 35 F.P.C. 99 (1966)*, aff'd*, Cincinnati Gas & Electric Co. v. FPC, 376 F.2d 506 (6th Cir. 1967); *Alabama Electric Co-op v. Alabama Power Co.*, 38 F.P.C. 962 (1967). *See also* Senate Hearings on Antitrust and Monopoly, *supra* note 14, at 792–93. Former FPC Commissioner Charles R. Ross (1961–68) explained that the FPC "has not actively or aggressively seen fit to inquire into the many pooling [] and joint generation agreements . . . There seems to be an understanding that it is advantageous to have the companies file such agreements, and that for the time being the Commission should hold off analyzing them."). Even where IOU power pool members did file rate schedules, allocating costs of service provided by a power pool was an inexact science, and the FPC relied on the IOU's own records and judgments. *See supra* note 68.

interstate pool, state regulators lost visibility into the utility's operations.[80] By accounting for energy through the pool, an IOU could obscure their operations from state regulators. This shift effectively made federal oversight more important.[81]

FERC generally tolerated the anti-competitive effects of IOU pooling agreements, believing that efficiency gains associated with such voluntary coordination under section 202 were greater than any benefits that might be unlocked through its more aggressive use of sections 205 and 206.[82] But by the late 1970s, following four Supreme Court decisions about the intersection of the FPA and antitrust law,[83] FERC recognized that its determinations under sections 205 and 206 must address effects on competition.[84] With regard to IOU-dominated pool agreements, FERC considered competition by scrutinizing pool membership criteria to ensure that

80. *See* Pechman, *supra* note 49, at 69–70 (explaining that IOUs prevent state regulators from investigating how utilities "manipulate information" in power pool cost calculations by declaring the model proprietary, and thereby "withhold[ing] information and inhibit[ing] a state regulatory commission's ability to effectively regulate"); *Id.* at 71–75 (concluding that the decision of the New York Power Pool to leave dispatch decisions up to each IOU rather than centrally coordinate dispatch violated IOUs' duties under state law to provide least-cost service, but state regulators were powerless to order the federally regulated pool to change course); *Id.* at 83–95 (explaining that reserve margins that were once regulated by the state shifted to power pool control and outlining how it is "possible to bias" the calculation, "which in turn increases the level of investment required"); Charles G. Stalon and Reinier H.J.H. Lock, *State-Federal Relations in the Economic Regulation of Energy*, 7 YALE J. ON REG. 427, 441 (noting that multi-state utilities found it convenient to "maintain the façade" of single-state regulation and regulators often went along, "cling[ing] to the myth of self-sufficient single state operating companies"); *Id.* at 451 (noting that with utilities increasingly meeting resource adequacy needs through wholesale purchases "state regulators were forced to balance the undesirability of losing jurisdiction over local utilities that purchased from neighboring utilities against the increased risks associated with utilities' building their own capacity to meet local needs"); FPC, Brief for the Federal Power Commission, Supreme Court Docket of FPC v. Southern Cal. Edison, 1963 WL 106064, at *12–13 (stating that "state commissions lack th[e] essential legal authority and cannot effectively deal with" wholesale sales effectuated through an interstate power pool because they lack the "highly specialized staff and, even more indispensable, the legal authority to compel production of the books and records of all members of the system" need to ensure just and reasonable rates); Senate Hearings on Antitrust and Monopoly, *supra* note 14, at 656 (Montana Senator Metcalf testifying that IOU "reporting requirements . . . are a sham" and noting that "terms of pooling arrangements among utilities are hidden").

81. By 1970, IOUs had organized 21 power pools that included 60% of the nation's generation capacity. 1970 NATIONAL POWER SURVEY, *supra* note 44, at I-17-2–7. 1964 NATIONAL POWER SURVEY, *supra* note 44, at Vol II:365 ("The need for increased pooling and coordination has primarily arisen out of the technological developments in the art of generating and transmitting electric power which have made the optimum economical units too large for all but the biggest systems."). Following a regional blackout in 1965, reliability benefits associated with interconnection drove further coordination and pooling efforts. 1970 NATIONAL POWER SURVEY, *supra* note 44, at I-1-15.

82. *See, e.g., New England Power Pool Agreement*, 56 F.P.C. 1562, at p. 1587 (1976) ("Although it appears that NEPOOL might narrow the basis for wholesale competition . . . reduction in cost of service resulting from this new-found coordination is most certainly in the public interest and outweighs any possible reduction in wholesale competition."); *Mid-Continent Area Power Pool Agreement*, 58 F.P.C. 2622, at p. 2626 (1977), *aff'd*, *Central Iowa Power Cooperative*, 606 F.2d at 1162–1163; *Public Service Co. of Indiana, et al.,* 47 F.P.C. 1396, at p. 1407, *remanded by,* City of Huntingburg, Indiana v. FERC, 498 F.2d 778, 785 (D.C. Cir. 1974); Order No. 888, *supra* note 31, at 21,568.

83. Gainesville Utilities Dept. v. Florida Power Corp., 402 U.S. 515 (1971); Gulf States Utilities v. FPC, 411 U.S. 747 (1973); Otter Tail Power v. U.S., 410 U.S. 366 (1973); FPC v. Conway Corp., 426 U.S. 271 (1976).

84. *Re Missouri Power & Light Co.*, 5 F.E.R.C.¶ 61,086, at p. 61,140–41(1978); Central Power & Light Co. v. FERC, 575 F.2d 937, 938 (D.C. Cir. 1978) ("While the FERC does not have authority to adjudicate antitrust actions, antitrust considerations are relevant when it exercises its discretion subject to a public interest mandate.").

they did not unduly discriminate against TDUs and other non-IOU entities.[85] But FERC continued to dismiss sweeping complaints about the anti-competitive nature of IOU-dominated pools.[86]

By then, the industry was in the midst of significant and rapid changes. Sharp increases in the cost of utility service in the 1970s[87] led energy-intensive industrial consumers to construct their own generation rather than rely solely on an IOU for power[88] and spurred Congress to enable new entry into the wholesale power business and expand FERC's authority to facilitate sales of non-IOU generated energy.[89] Meanwhile, regulators in many states required IOUs to conduct competitive procurements for new generation rather than simply authorizing the IOU to construct a power plant itself.[90] In 1992, Congress removed a legal barrier to non-utility generation, modifying financial regulations that hindered investment.[91] For the first time, new non-IOU generation projects outpaced IOU additions to the nation's electric system.[92] As consumer rates soared, IOUs' forecasted demand growth failed to materialize and their systems were bloated with expensive and unneeded capacity.[93]

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85. *See, e.g., Mid-Continent Area Power Pool Agreement*, 58 F.P.C. 2622, at p. 2635–36, *aff'd*, *Central Iowa Power Cooperative*, 606 F.2d at 1171–72. For an example of FERC's earlier approach, *see Re Western Massachusetts Electric Co.*, 39 F.P.C. 723, at p. 737 (1968) (noting that the municipal utilities applied to join a regional group controlled by IOUs and were denied because the group's bylaws limit membership to IOUs); Power Pooling in the U.S., *supra* note 16, at 195 (Letter from the APPA noting a "history of difficulties that public power systems have generally encountered in gaining admittance to voluntary coordination agreements"). Senate Hearings on Antitrust and Monopoly, *supra* note 14, at 431 (stating that an agreement among New England IOUs that excluded municipals "appeared to be a formidable combination in restraint of trade.").

86. *Mid-Continent Area Power Pool Agreement*, 58 F.P.C. at pp. 2651, 2656 (1977) (Opponents of the pool agreement alleged that it "establishe[d] a machinery for private regulation of industry in violation of the basic public-interest standard[]" of the FPA and fixed prices and restrained trade in violation of antitrust law.); *City of Frankfort Kentucky v. Kentucky Utilities Co., et al.*, 3 F.E.R.C. ¶ 63,004, at p. 65,032 (1977) (A Kentucky city argued that "through monopolistic control over transmission" certain IOUs "monopolized and divided up territory among" themselves while "segregating and isolating municipals and co-ops . . . and preventing them from doing business with each other and with private utilities except on restrictive terms."); *New England Power Pool Agreement*, 48 F.P.C. 1477, at p. 1478 (1972) (Municipal utilities alleged that FERC "erred in failing to recognize the effects of permitting all the large utilities, legal competitors of each other, to combine all of the generation and all of the transmission in [the region] under an all-encompassing agreement without protecting the rights and opportunities of the small municipal and cooperative systems.").

87. FERC, The Transmission Task Force's Report to the Commission, Electricity Transmission: Realities, Theory, and Policy Alternatives, at 34 (Oct. 1989) ("Pressure for wholesale customer bypass of its host utility as its only supplier has never been greater than during the past ten years.") [hereinafter Transmission Task Force].

88. Stalon and Lock, *supra* note 80, at 450. Some industrial users merely threatened to build cogeneration, in the hope of a receiving a lower rate from the utility. Transmission Task Force, *supra* note 87, at 36.

89. 16 U.S.C. § 824a-3(j), (k).

90. Stalon and Lock, *supra* note 80, at 450.

91. 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).

92. Bernard S. Black & Richard J. Pierce, Jr., *The Choice Between Markets and Central Planning in Regulating the U.S. Electricity Industry*, 93 COL. L. REV. 1339, 1349 (1993).

93. Stalon and Lock, *supra* note 80, at 432 ("Economic forces dramatically reduced the rate of demand growth for electricity and increased the real costs and risks associated with building new generation capacity.").

These developments put pressure on FERC to unlock transmission access for a burgeoning independent generation market.[94] Reformists hoped that wholesale competition would provide incentives to control generation costs, shift development risks from captive IOU ratepayers to investors in non-IOU generation, encourage innovation in generation technology and business models, and motivate investors to develop new projects.[95] To realize those benefits, FERC would have to address IOU control of transmission and break up the IOU transmission clubs.

III. FERC ADDRESSES IOU TRANSMISSION DOMINANCE AND INITIATES THE RISE OF INDEPENDENT OPERATORS

A. FERC Mandates Comparable Transmission Service and Information Transparency Under Section 206

FERC understood that IOUs were an obstacle to the development of competitive markets for wholesale power.[96] By the late 1980s, FERC began taking significant but cautious steps to address anti-competitive IOU transmission service.[97] For example, in a merger proceeding, FERC determined that the merged entity could exercise market power through its transmission control and therefore conditioned its merger approval on the merged entity's provision of fair transmission service to third parties.[98] In an application for permission to sell power at market-based rates, an IOU committed to file a transmission tariff that would "ensure that

94. FERC, Notice of Public Conference and Request for Comments on Electricity Issues, 55 F.E.R.C. ¶ 61,069 (1991) ("As competitive markets in electricity generation are emerging, increasing pressure is placed on providing expanded transmission service. Transmission, however, remains a natural monopoly."); *see also* Black and Pierce, *supra* note 92, at 1344–1350 (outlining factors that upset the status quo in utility regulation and "turned competitive markets for wholesale power from a theoretical possibility into a strategy that is supported by almost all interested parties").

95. Paul L. Joskow, *Electricity Sector Restructuring and Competition: Lessons Learned*, 40 CUADERNOS DI ECONOMIA 554 (Dec. 2003).

96. Transmission Task Force, *supra* note 87, at 67 (concluding that transmission or lack thereof can be a barrier to entry in the emerging non-utility generation market and that "clear examples" of IOUs exercising market power to "stifle competition are abundant"); *Id.* at 187 ("The current market power of transmission incumbents is so pervasive that independent power producers are unlikely to be willing to take substantial financial risks in the absence of assured access to the grid at reasonable prices"); FERC, Notice of Inquiry, Regulation of Electricity Sales-for-Resale and Transmission Service, Phase 1, 31 F.E.R.C. ¶ 61,228 (1985) ("Availability of transmission services is a necessary element to competitive markets.").

97. In fairness to FERC, it moved in the late 1970s to address undue discrimination on an IOU-by-IOU basis but federal courts rejected some of its more aggressive remedies. *See* Harvey L. Reiter, *Competition and Access to the Bottleneck: The Scope of Contract Carrier Regulation Under the Federal Power and Natural Gas Acts*, 18 LAND & WATER L. REV. 1, 20–28 (1983) (discussing Florida Power & Light Co. v. FERC, 660 F.2d 668 (5th Cir. 1981) and New York State Electric & Gas Co. v. FERC, 638 F.2d 288 (2d Cir. 1981)).

98. *See, e.g., Utah Power & Light Co., et al.,* , 45 F.E.R.C. ¶ 61,095, at p. 61,288–90; *order on reh'g*, 47 F.E.R.C. ¶ 61,209, at p. 61,736 ("the transmission access conditions we imposed were the minimum necessary to alleviate the probable anticompetitive effects of the merger by preventing the merged company from exercising its market power to foreclose access by competitors to the relevant bulk power markets."); *Pub. Serv. Co. of Colorado*, 58 F.E.R.C. ¶ 61,322, at p. 62,038 (1992) ("The Commission's fundamental competitive concern as expressed in recent decisions is that an increase in control over key transmission facilities may lead to a greater ability to block competing lower-cost suppliers from reaching wholesale electric customers."). Following the Utah/Pacificorp merger proceeding, other IOUs proposed similar transmission access conditions in merger proceedings. *See Kansas City Power & Light Co.*, 53 F.E.R.C. ¶ 61,097, at p. 61,276 (1990).

[it] cannot use its control over its transmission system to exercise market power in negotiating long-term firm power sales."[99] FERC concluded that this "open-access transmission service" would mitigate the utility's transmission market power and would promote competition.[100]

FERC's IOU-by-IOU efforts did not trigger industry-wide reforms. By 1995, FERC found that only twenty-one IOUs had "any form of open-access transmission,"[101] while the "vast majority of transmission-owning utilities ha[d] not agreed to give up their market power voluntarily."[102] Seeking to accelerate progress towards open and competitive wholesale markets, FERC proposed to address IOUs' anti-competitive transmission service on an industry-wide basis. It concluded that

> 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 in order 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."[103]

FERC acknowledged that its "prior willingness to tolerate the use of monopoly power over transmission to maintain and aggregate the utility's market power over generation occurred in the context of an industry structured largely as vertically integrated regulated monopolies."[104] In that environment, FERC had concluded "competition generally was not meaningfully available as a means to discipline prices."[105] However, given numerous changes in the industry, FERC determined that it had to review "discriminatory practices that once did not constitute undue discrimination."[106] Absent regulatory intervention, FERC predicted that IOUs would continue to 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 bulk power markets."[107]

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99. *Pub. Serv. Co. of Indiana*, 49 F.E.R.C. ¶ 61,346, at p. 62,239 (1989); *see also Pub. Serv. Co. of Indiana*, 51 F.E.R.C. ¶ 61,367 (1990) (approving open-access transmission tariff), *order on reh'g,* 52 F.E.R.C. ¶ 61,260, *appeal dismissed,* Northern Indiana Public Service Co. v. FERC, 954 F.2d 736 (1992). *See also Citizens Power & Light Corp.*, 48 F.E.R.C. ¶ 61,210 (1989) (approving application to sell power at "market-based" rates, in part because applicant did not own transmission facilities and "the most likely route to market power in today's electric utility industry lies through ownership or control of transmission facilities").

100. *Pub. Serv. Co. of Indiana*, 49 F.E.R.C. ¶ 61,346, at p. 62,249.

101. Order No. 888 NOPR, *supra* note 31, at 17,671.

102. *Id.* at 17,676.

103. *Id.* at 17,665; *id.* at 17,664 ("market power through control of transmission is the single greatest impediment to competition"); *id.* at 17,675–77 (cataloging discriminatory IOU transmission practices).

104. Order No. 888, *supra* note 31, at 21,568.

105. *Id.*

106. *Id.*

107. *Id.* 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].

Having found undue discrimination under section 206, FERC took remedial action on an industry-wide basis. It ordered all IOUs to file open-access transmission tariffs that would provide all customers with transmission service that is comparable to the service that IOUs provide for their own power marketing operations.[108] To support this comparability goal, FERC required IOUs to "unbundle" wholesale energy sales and transmission service by charging separate rates for each and taking transmission service for their own power marketing activities under their own tariffs. FERC also required IOUs to unbundle their own operations by separating their power marketing and transmission personnel pursuant to codes of conduct that would prohibit employees operating the transmission network from providing non-public information to power marketing personnel. FERC intended for these reforms to deprive IOUs of informational advantages they had in the power marketing business. To guide their wholesale market decisions, IOU power marketing personnel would have to use the same information that their transmission customers used.[109]

In a concurrently issued order, FERC supported this "functional unbundling" mandate with rules requiring IOUs to publish, on a real-time basis, information about their transmission systems that is available to their employees and that is pertinent to decisions they make involving the sale or purchase of electricity.[110] By "open[ing] up the 'black box' of [] transmission system information," and separating IOU employees by function, FERC aimed to "ensure that the utility does not use its access to information about transmission to unfairly benefit its own or its affiliates' sales."[111]

FERC found its comparability and information transparency requirements were "not enough to cure undue discrimination in transmission if those public utilities can continue to trade 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."[112] FERC conceded that it had previously tolerated discriminatory pool agreements because they improved the industry's efficiency even as they reinforced IOU market power.[113] Given the changes in the industry, FERC ordered IOUs to remove provisions in power pool agreements that granted members superior transmission access.[114] This mandate struck at the heart of IOU-dominated power pools.

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108. Order No. 2000, *supra* note 36, 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 31, at 21,547–21,549 (discussing FERC's "Comparability Standard").

109. Order No. 888-A, *supra* note 107, at 12,276; Order No. 888, *supra* note 31, at 21,552.

110. Order No. 889, *Open Access Same-Time Information System (Formerly Real-Time Information Networks) and Standards of Conduct*, 61 Fed. Reg. 21,737 (1996).

111. *Id*. at 21,740.

112. Order No. 888, *supra* note 31, at 21,593.

113. Order No. 888-A, *supra* note 107, at 12,296 ("Given the . . . efficiencies that could be gained through encouragement of coordination and pooling transactions, the Commission was willing to accept utility practices that provided third parties with transmission services that were distinctly inferior to the utility's own uses of the transmission system.")

114. Order No. 888, *supra* note 31, at 21,541.

FERC permitted IOUs to remedy unduly discriminatory power pools by disbanding them and creating Independent System Operators (ISOs), new entities that would operate utility-owned transmission facilities.[115] ISOs would be "public utilities" under the FPA because they would "operate[] facilities subject to the jurisdiction" of FERC.[116] As such, each ISO would have to maintain an OATT that is "just and reasonable and not unduly discriminatory," standards that would include compliance with FERC's Open-Access orders (Orders No. 888 and 889).

To foster ISOs that would efficiently operate the bulk power system and mitigate IOU transmission dominance, FERC articulated eleven "principles" to guide development of a "properly constituted ISO."[117] FERC's first and "fundamental"[118] principle was that an ISO's "governance should be structured in a fair and non-discriminatory manner."[119] Because "the primary purpose of an ISO is to ensure fair and non-discriminatory access to transmission services," FERC determined that

> an ISO 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 ISO 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.[120]

To reinforce the ISO's independent governance, FERC prohibited ISOs and their employees from having any financial interest in the performance of any market participant.[121] The remaining principles define ISO duties,[122] policies,[123] and functions.[124] Taken together, the ISO must have operational control of the transmission network, manage the network pursuant to an OATT, ensure short-term reliability, adopt pricing policies that promote efficient trading, be able to take action consistent with those policies to relieve transmission constraints, make transmission information available, coordinate with neighboring regions, and administer dispute-resolution processes.[125] While FERC said it would evaluate ISO proposals against all eleven principles, it emphasized that "ISO Principles 1 (independence with respect to governance) and 2 (independence with respect to financial interests) are fundamental to ensuring that an ISO is truly independent and would not favor any class of transmission users."[126]

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115. *Id.* at 21,552.
116. 16 U.S.C. § 824(e).
117. Order No. 888, *supra* note 31, at 21,596.
118. Order No. 888-A, *supra* note 107, at 12,317.
119. *Id.* at 12,316.
120. Order No. 888, *supra* note 31, at 21,596.
121. *Id.*
122. *Id.* (discussing principles 3, 4, 5, and 6).
123. *Id.* (discussing principles 7 and 8).
124. *Id.* at 21,596–97 (discussing principles 9, 10, and 11).
125. Order No. 888, *supra* note 31, at 21,596–97.
126. Order No. 888-A, *supra* note 107, at 12,317.

IOU power pool members responded with ISO proposals that reflected their intent to retain control. In the first proceeding about an ISO proposal, FERC rejected proposals filed by PJM IOUs because they reserved board seats for IOUs and provided IOUs with supermajority representation on administrative committees, allowing them to exercise "ultimate control" over the ISO.[127] FERC also rejected the New England Power Pool's (NEPOOL) proposed restructuring because it would similarly provide "a few large utilities [with] excess influence."[128] NEPOOL responded with a new proposal that FERC rejected because it too provided IOUs with control over the organization.[129] FERC also shot down a proposal filed by New York Power Pool IOUs that would have allowed them to "continue to exercise substantial voting power" in their proposed ISO.[130] FERC rejected a subsequent settlement filed by the New York IOUs because the voting structures still "vest[ed] disproportionate authority in the Transmission Providers."[131]

In short, IOUs that dominated tight power pools sought to maintain their control over newly created ISOs. PJM IOUs admitted that they intended to reinforce the status quo. They argued that IOU control over ISO decision making "merely reflects the current fact that the existing [IOU] PJM members have the largest investment" in transmission facilities and "the greatest responsibilities" to captive retail ratepayers.[132] Their governance proposal, they claimed, therefore "equitably reflects the interests" of the IOUs who had agreed to create the ISO.[133] Marrying governance and transmission ownership would effectively recreate the power pool structure and allow IOUs to retain perpetual control over the regional power system. At a time of uncertainty for the industry, the PJM IOUs sought reassurances from FERC that their privileged positions in the industry would be undisturbed by competition for power generation. FERC explicitly declined to endorse any IOU entitlements linked to transmission ownership.

But IOUs pressed their claims in federal court. In approving the PJM ISO tariff, FERC rejected an IOU-filed proposal that would have allowed IOUs to unilaterally file certain transmission tariff amendments, concluding that only the ISO would have authority under FPA section 205 to file changes to transmission rate design and terms of service.[134] The D.C. Circuit rejected FERC's reading of section 205, holding that, as transmission owners, IOUs have filing rights under section 205 that FERC cannot revoke, although the court noted that IOUs may choose

127. *Atlantic City Elec. Co.*, 77 F.E.R.C. ¶ 61,148, at p. 61,574 (1996).

128. *New England Power Pool*, 83 F.E.R.C. ¶ 61,045, at p. 61,260 (1998).

129. *New England Power Pool*, 86 F.E.R.C. ¶ 61,262, at p. 61,965 (1999).

130. *Central Hudson Gas & Electric*, 83 F.E.R.C. ¶ 61,352, at p. 62,409 (1998).

131. *Central Hudson Gas & Electric*, 87 F.E.R.C. ¶ 61,135, at p. 61,540 (1998).

132. 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). PJM subsequently filed a new governance proposal, which FERC approved. *Pennsylvania-New Jersey-Maryland Interconnection*, 81 F.E.R.C. ¶ 61,257 (1997).

133. 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). *See also Central Hudson Gas & Electric*, 83 F.E.R.C. ¶ 61,352, at p. 62,409 ("As in NEPOOL II, the NYPP members contend that they are entitled to such voting power") (emphasis added).

134. *Pennsylvania-New Jersey-Maryland Interconnection*, 81 F.E.R.C. ¶ 61,257, at p. 62,279.

to voluntarily give up rights by contract.[135] FERC subsequently approved a settlement between PJM IOUs and PJM that allocated section 205 filing rights and provided IOUs with the "exclusive and unilateral right" to make filings about transmission rate design, recovery of transmission revenue requirements, and incentive and performance-based rates.[136] FERC approved similar arrangements for other ISOs and their IOU members,[137] although it warned IOUs that it would monitor how they wield those rights to ensure that they do not do so in a way that compromises ISO independence.[138]

IOUs were also able to gain significant influence over ISO decisionmaking through participation in stakeholder committees. FERC approved two-tier governance structures, with lower-level committees of market participants and an independent board that held final decisionmaking authority.[139] In New York and PJM, a stakeholder committee acts as a gatekeeper for proposed rule changes submitted to the board for its approval.[140] In other regions, stakeholders generally advise the board, although in some regions stakeholders have authority to file proposed rule changes at FERC or protest existing rules.[141] IOUs play prominent roles in these stakeholder committees.

FERC's Open-Access mandate (and subsequent ISO formation orders) nonetheless significantly weakened IOUs' positions. FERC understood that mitigating IOU transmission dominance was necessary to realize its vision of competitive wholesale power markets. While it ordered significant remedies to address IOUs' anti-competitive behavior, FERC still left IOUs at the center of the industry. Functional unbundling sought to rein in IOUs through behavioral rules and tariff terms. For the time being, FERC was reluctant to impose structural reforms that would separate IOUs from transmission operations, planning, and even ownership.

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135. Atlantic City Elec. Co., et al v. FERC, 329 F.3d 1, 9–11 (D.C. Cir. 2002).

136. *Pennsylvania-New Jersey-Maryland Interconnection,* 105 F.E.R.C. ¶ 61,294, at P 11 (2003).

137. *Midwest Indep. Transmission Sys. Operator, Inc.*, 110 F.E.R.C. ¶ 61,380, at P 19 (2005) (citing *ISO New England, Inc.*, 106 F.E.R.C. ¶ 61,280, at P 72 (2004) and *Southwest Power Pool, Inc.*, 106 F.E.R.C. ¶ 61,110, at P 98 (2004)). Note that PJM, ISO-NE, MISO, SPP had already attained RTO status by the time FERC approved these agreements. RTOs are described in the next section.

138. *Pennsylvania-New Jersey-Maryland Interconnection,* 105 F.E.R.C. ¶ 61,294, at P 33. As discussed in Part IV, IOUs would use their filings rights to reinforce their transmission dominance by frustrating FERC's efforts to foster competition in transmission development. *See, e.g.*, *PJM Interconnection*, 147 F.E.R.C. ¶ 61,128, at P 262 (2014) (noting that PJM IOUs have the exclusive right to file changes in cost allocation methods). *See also Monongahela Power Co.*, 162 F.E.R.C. ¶ 61,129, at P 97 (2018) (approving IOUs' local planning processes and their unilateral right to amend those processes). I discuss the connections between transmission cost allocation, local transmission planning, and competition in sections IV.C and D and V.

139. Order No. 2000, *supra* note 36, at pgs. 11, 94.

140. MARK JAMES ET AL., R STREET POLICY STUDY NO. 112: HOW THE RTO STAKEHOLDER PROCESS AFFECTS MARKET EFFICIENCY 8–9 (2017).

141. *Id*. at 4–10.

B. FERC Encourages Further Structural Reforms Under Section 202

Three years after it issued its landmark Open-Access orders, FERC found that there remained "impediments to competition caused by continued discriminatory conduct by transmission owners."[142] To "reduce opportunities for unduly discriminatory conduct" by IOUs[143] and resolve the "engineering and economic inefficiencies inherent in the current [utility-by-utility] operation and expansion of the transmission grid,"[144] FERC encouraged structural reforms. In Order No. 2000, FERC sketched the characteristics and functions of ISO-like Regional Transmission Organizations (RTOs) and required IOUs to consider ceding operational control of their transmission assets to an RTO.[145] FERC hoped that four RTOs would ultimately cover the entire continental United States.[146]

Many in the industry urged FERC to order all IOUs to surrender operational control of their respective transmission assets and join an RTO.[147] As it did in Order No. 888, FERC made findings in Order No. 2000 about undue discrimination that were rooted in each IOU's "incentive and [ ] opportunity to favor their generation interests over those of their competitors."[148] In both orders, this generic finding was backed by specific evidence of utility misconduct,[149] although FERC conceded that some of the evidence amounted to unproven allegations.[150] Nonetheless, in Order No. 888 FERC "conclusively" found that undue discrimination by IOUs was blocking competition, thus meeting the first prong of its dual burden under section 206.[151] FERC's ultimate finding in Order No. 2000 that there remained "continuing opportunity for undue discrimination" was more timid and insufficient, according to FERC, to necessitate any remedy under section 206.[152] Instead, FERC acted under section 202, issuing guidelines about RTOs and committing to review RTO proposals under section 205 pursuant to its guidelines.[153]

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142. Notice of Proposed Rulemaking, *Regional Transmission Organizations,* 64 Fed. Reg. 31,390, at 31,402 (1999) [hereinafter Order No. 2000 NOPR); Rao and Tabors, *supra* note 49, at 1 (saying that IOUs "learned to profit largely within the [open-access] rules" by "effectively foreclosing competition and limiting access to key markets" and that IOUs were able to stretch the rules in part due to the "self-policing nature" of functional unbundling and the difficulty in detecting this behavior). *See also* SMD NOPR, *supra* note 4, at P 333 ("The Commission has found specific instances of abuse by transmission providers regarding the Available Transfer Capability calculation process and delays in the completion of transmission facilities studies. There are obvious incentives for a vertically integrated transmission provider to favor its own generation by delaying facilities studies or manipulating the Available Transfer Capability calculations or postings on its OASIS.").

143. Order No. 2000-A, *Regional Transmission Organizations*, 65 Fed. Reg. 12,088, at 12,091 (2000).

144. Order No. 2000, *supra* note 36, at pg. 13.

145. *Id.* at pg. 3.

146. *PJM Interconnection*, 96 F.E.R.C. ¶ 61,061, at p. 61,226 (2001); *Southern Company Services*, 96 F.E.R.C. ¶ 61,064, at p. 61,280 (2001); *Alliance Companies, et al.*, 97 F.E.R.C. ¶ 61,327, at p. 62,530 (2001) (noting that Midwestern state utility regulators "overwhelmingly prefer a single Midwest RTO).

147. Order No. 2000, *supra* note 36, at pgs. 43–45.

148. *Id.* at pg. 28.

149. *Id.* at pgs. 28-29; Order No. 888, *supra* note 31, at 21,567–58; Order No. 888 NOPR, *supra* note 31, at 17,676, 17,678.

150. Order No. 2000, *supra* note 36, at pgs. 28–29, Order No. 888, *supra* note 31, at 21,568.

151. Order No. 888, *supra* note 31, at 21,569.

152. Order No. 2000, *supra* note 36, at pgs. 29, 60.

153. *Id*. at pg. 62.

As it did in the Open-Access orders, FERC attempted to address IOU control of transmission information. It found that even with its transparency and disclosure rules a "fundamental mistrust of transmission owners" in the industry[154] was impeding market development and adversely affecting reliability.[155] Because information needed for reliable and efficient operations has commercial value,[156] market participants were reluctant to share operational and planning data with IOUs out of suspicion that they might be using that information to gain an advantage.[157] FERC therefore found "a disconnect between electrical flows and information flows" that could have major reliability consequences.[158] Moreover, market participants feared discriminatory curtailment and were skeptical of the accuracy of transmission availability data provided by IOUs. FERC hypothesized that lack of confidence in IOU operations and data raised the risk profile of market transactions, increasing their costs and reducing competition.[159]

For RTOs to become "beneficial platform[s] for both competition and reliability," they needed to see "the big picture by having access to real-time information on conditions and schedules for the entire regional grid."[160] Moreover, RTOs must use that information to resolve reliability issues without regard for the financial interests of any market participant.[161] To be effective, RTOs needed to "be independent in both reality *and perception*"[162] so that they could accumulate accurate information and utilize it to enhance system efficiency rather than enrich particular market participants.

FERC concluded that implementation of Order No. 888 was unlikely to change perceptions about discriminatory IOU behavior and would therefore prove insufficient to facilitate competitive markets, in part because IOU compliance with standards of conduct was difficult to enforce.[163] FERC hoped that RTOs would "eliminat[e] the mistrust in the current grid management"[164] and thereby obviate the need for standards of conduct. To realize this vision of a "better structured market where operational control and responsibility for the transmission system is structurally separated from the merchant generation function of owners of transmission,"[165] the RTO's independence had to extend from its governance to its routine operations.[166]

To further mitigate IOU transmission dominance, FERC supplemented its comparability, transparency, and independence principles with a regionalization

154. Order No. 2000 NOPR, *supra* note 142, at p. 31,402.

155. Order No. 2000, *supra* note 36, at pgs. 27–29.

156. Order No. 2000 NOPR, *supra* note 142, at p. 31,399 ("information that is needed for reliability purposes may also have a commercial value") (citing *Midwest ISO*, 84 F.E.R.C. ¶ 61,231, 62,158–59 (1998)).

157. Order No. 2000, *supra* note 36, at pg. 29.

158. Order No. 2000 NOPR, *supra* note 142, at p. 31,399.

159. Order No. 2000, *supra* note 36, at pg. 29.

160. Order No. 2000 NOPR, *supra* note 142, at p. 31,399.

161. Order No. 2000, *supra* note 36, at pg. 113 (citing *Midwest ISO*, 84 F.E.R.C. 61,231, at p. 62,158).

162. *Id.* at pgs. 79, 84.

163. *Id.* at pgs. 16, 28.

164. *Id.* at pg. 39.

165. *Id.* at pg. 28.

166. *Id.* at pg. 38.

requirement. IOUs had charged transmission customers a separate, additive access charge every time a transmission contract path crosses the boundary of another IOU.[167] This practice, known as rate pancaking, effectively limited the scale of wholesale transactions and resulted in highly concentrated markets.[168] By expanding the geographic scope of trading under a single tariff, pancake-free RTO regions would "reduce the potential for market power abuse,"[169] attract new entrants, enhance liquidity, and allow for more sophisticated transactions.[170]

FERC expected that regional operation would also be technically superior to the status quo.[171] Because power flows do not match transmission "contract paths" and instead follow paths of least electrical resistance, energy traded between two parties may traverse transmission lines owned by numerous utilities.[172] As the volume of trade increases, each utility may find it progressively more challenging to estimate available transmission capacity that it must make available for wholesale trades under FERC's Open-Access orders.[173] Moreover, an overloaded line may raise energy prices by preventing low-cost power from reaching consumers.[174] This "congestion"[175] had been addressed by each utility without assessing costs imposed on other transmission users, raising the suspicion that the utility was acting in its own interests to the detriment of consumers.[176] With greater visibility

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167. Order No. 2000 NOPR, *supra* note 142, at p. 31,401.

168. *Id.*

169. Order No. 2000, *supra* note 36, at pg. 39.

170. *Id.*

171. Order No. 2000 NOPR, *supra* note 142, at pp. 31,408–09 (explaining that because electric power traverses transmission lines according to physical laws, power injected from a generator connected to a utility's system will affect flows on infrastructure owned by other utilities. These so-called parallel flows complicate each utility's calculation of transmission capacity available for wholesale sales, which can lead to disputes about compensation and result in curtailments); Transmission Task Force, *supra* note 87, at 63–66 (reporting that in some regions as much as 50% of a power travels hundreds of miles from the contract path across lines of uncompensated utilities and that the remedy is typically uneconomic curtailment).

172. Transmission Task Force, *supra* note 87, at 64.

173. Order No. 2000 NOPR, *supra* note 142, at pp. 31,399–400.

174. Richard J. Pierce, *The State of the Transition to Competitive Markets in Natural Gas and Electricity,* 15 ENERGY L. J. 323, 339–340 (1993) (citing various papers by William W. Hogan).

175. Congestion is "the inability to inject and withdraw additional energy at particular locations in the network due to the fact that the injections and withdrawals would cause power flows over a specific transmission facility to violate the reliability limits for that facility." Notice of Proposed Rulemaking, *Long-Term Firm Transmission Rights in Organized Markets*, Notice of Proposed Rulemaking, 114 F.E.R.C. ¶ 61,097, at P 14 (2006). A Department of Energy report explains that congestion:

> occurs when there is not enough transmission capability to support all requests for transmission services, and in order to ensure reliability, [] system operators must re-dispatch generation or, in the limit, deny some of these requests to prevent [] lines from becoming overloaded. In other words, transmission congestion . . . refers to requests for deliveries (transactions) that cannot be physically implemented as requested.

Bernard C. Lesieutre and Joseph H. Eto, *Electricity Transmission Congestion Costs: A Review of Recent Report*, ERNEST ORLANDO LAWRENCE BERKELEY NAT'L LAB (Oct. 2003), https://www.energy.gov/sites/prod/files/oeprod/DocumentsandMedia/review_of_congestion_costs_october_03.pdf.

176. Order No. 2000 NOPR, *supra* note 142, at p. 31,400.

into network conditions than any single IOU,[177] an RTO would be better able to publish accurate transmission information and set efficient prices.

Two years after it issued Order No. 2000, FERC proposed its so-called Standard Market Design (SMD) order, which would have required all IOUs to place their transmission assets under the control of an independent entity, such as an RTO.[178] FERC capitulated to political pressure and terminated the SMD proceeding three years after it released the proposal.[179] Today, separating transmission operations from transmission ownership (known as operational unbundling) remains optional. As a result of FERC's failure to finalize the denouement of its Restructuring Trilogy (SMD along with Orders Nos. 888 and 2000), the industry is split along geographic lines. In the Eastern Interconnection, nearly all IOUs outside of the Southeast are RTO members.[180] In the West, only California IOUs have ceded control of their transmission assets to an independent entity. Of the four multi-state RTOs,[181] MISO is the only one that was not built upon the ashes of an IOU power pool.

Order No. 2000 and the SMD NOPR were premised on a fundamental mismatch between IOUs' unearned advantages and FERC's vision for the power sector's future. State-sanctioned IOUs were the dominant industry actor in the twentieth century, but FERC saw that their continued dominance was incompatible with a competitive power generation sector. FERC hoped that independent interstate entities — directly under FERC's control — would be the key to unlocking a more dynamic and innovative power industry in the twenty-first century.

IV. IOUS EXPLOIT THEIR STATE-GRANTED SERVICE TERRITORIES TO AVOID FERC-MANDATED COMPETITIVE TRANSMISSION DEVELOPMENT PROCESSES

In 2007, FERC applied its comparability and information transparency principles to IOU transmission planning processes. With this move into transmission planning, FERC intended to shine a light on transmission development decisions that had long been internal IOU matters. Four years later, in Order No. 1000, FERC required IOUs to engage in regional planning with the goal of meeting transmission needs across service territories more efficiently. Under Order No. 1000, regional planners must consider non-IOU developers on a non-discriminatory basis for project development opportunities. With these two reforms, FERC formalized project development processes and opened opportunities for non-IOU entities to finance projects through cost-of-service rates. IOUs persistently objected through legal processes and informal practices. FERC has often sided with

177. *Id.* ("a regional organization would have accurate and reliable information about existing and possible future conditions on the grid. Such information is generally not available to individual transmission providers.")

178. *See* SMD NOPR, *supra* note 4, at P 100.

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

180. Part of Emera Maine's service territory is not served by ISO-NE. Louisville Gas & Electric and Kentucky Utilities withdrew from MISO in 2006. Both utilities are subsidiaries of PPL.

181. NYISO and CAISO are not RTOs due to their single state coverage. *New York ISO, et al.*, 96 F.E.R.C. ¶ 61,059 (2001) (rejecting New York ISO Order No. 2000 compliance filing); *California Indep. Sys. Operator, et al.*, 112 F.E.R.C. ¶ 61,155 (2005) (terminating proceeding about whether CAISO meets Order No. 2000 requirements).

IOUs and failed to follow through on the Order's lofty goal of bringing competitive discipline to transmission development. IOUs continue to dominate transmission development by focusing on non-competitive projects within their state-granted service territories.

A. Connecting Transmission Planning and Transmission Dominance

More than half a million miles of transmission lines crisscross the continental United States.[182] Wires, poles, towers, substations, and other system components have a useful life of several decades,[183] and the rights-of-way may host generations of transmission infrastructure. Additions to the interconnected interstate system affect the "vast pool of energy"[184] that charges the network and flows pursuant to the laws of physics. Because changes to the network directly affect energy flows across the network, proposed additions must be analyzed to ensure they do not disrupt reliable operations. Beyond these technical considerations, the reach and design of the network have vast economic and environmental implications. The network's reach shapes the mix of resources that supply power, potentially unlocking location-constrained renewable resources, such as hydro, wind, and solar, or connecting to fossil resources, such as coal mines and natural gas shale plays. In addition, transmission availability can influence industrial and population development patterns.

Transmission expansion must be thoughtfully planned due to its direct effects on industry operations as well as the broader societal consequences of extending the interstate network. In this section, I begin by outlining the goals of transmission planning and then justify the necessity of strong oversight. The ability of an IOU to unilaterally plan network expansion can reinforce and perpetuate its transmission dominance. In Part III, I summarized how FERC separated IOU transmission ownership from operational control by imposing functional unbundling and encouraging structural separation through operational unbundling. In this Part, I explain why it is imperative that FERC separate ownership from planning.

Planning for system expansion was historically conducted on a utility-by-utility basis.[185] Transmission expansion connected to newly constructed generation or to neighboring systems.[186] Once the industry began to formalize reliability

182. There are approximately 600,000 miles of transmission line miles in the United States. DEP'T OF ENERGY, QUADRENNIAL ENERGY REV. 3–4 (Apr. 2015), https://www.energy.gov/sites/prod/files/2015/04/f22/QER_Ch3.pdf. About 240,000 miles of those are 230kV or above and considered "high voltage." EDISON ELEC. INST., ISSUES AND POLICY: TRANSMISSION, https://www.eei.org/issuesandpolicy/transmission/Pages/default.aspx.

183. Jeff Hein, et al., *Transmission Planning Process and Opportunities for Utility-Scale Solar Engagement within the Western Electricity Coordinating Council*, NAT'L RENEWABLE ENERGY LAB., at 7 (Nov. 2011) (noting that bulk power infrastructure has a typical lifespan of 40 to 60 years).

184. New York v. FERC, 535 U.S. 1, 7 (2002).

185. SMD NOPR, *supra* note 4, at P 336 ("Transmission planning and expansion have generally been performed for a single control area rather than on a regional basis. This yields sub-optimal solutions . . . ").

186. 1970 NATIONAL POWER SURVEY, *supra* note 44, at I-16-3 (noting that "many new transmission facilities are associated with new generating plant additions"); Richard P. Bonnifield & Ronald L. Drewnowski, *Transmission at a Crossroads*, 21 ENERGY L. J. 447, 461 (2000) ("It was the generation prudence review by the state utility commissions that justified the investment in transmission expansion."); James J. Hoecker and Douglas W. Smith, *Regulatory Federalism and Development of Electric Transmission: A Brewing Storm?* 35 ENERGY

standards, transmission planners typically categorized projects as 'reliability' or 'economic,' to distinguish between projects aimed at complying with reliability criteria and expansions that lower production costs.[187] Regional economic dispatch, pioneered by power pools and furthered by the development of ISOs and RTOs, enhanced opportunities for transmission expansion designed to reduce transmission "congestion."[188] Building more transmission in the right locations can relieve congestion that that prevents low-cost power from reaching consumers, thereby reducing regional costs and improving the power system's efficiency.

Transmission expansion can also facilitate achievement of public policy objectives and other goals that are difficult to monetize.[189] Lines built to connect to areas with high wind or solar potential can unlock energy resources that meet state renewable energy mandates or federal air quality requirements. New infrastructure might also contribute to a system's fuel diversity, mitigating the effects of fuel price increases or shortages.[190] New transmission can also "strengthen and increase the flexibility of the overall transmission network," which can "create real

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L. J. 71, 75 (2014); Stalon and Lock, *supra* note 80, at 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"); Vikram S. Budhraja et al., *Improving Electricity Resource Planning Processes by Considering the Strategic Benefits of Transmission*, 22 ELEC. J. 54 (Mar. 2009); Joseph Eto and Bernard Lesieutre, The Consortium for Electric Reliability Technology Solutions, LAWRENCE BERKELEY NAT'L LAB., *Transmission-Planning Research & Development Scoping Project*, at 3 (July 2004), https://eta-publications.lbl.gov/sites/default/files/certs-trans-planning-research.pdf [hereinafter Scoping Project]:

> In the past, utilities planned transmission jointly with generation. The purpose of transmission was to bring power from distant generation sources to meet local demand. Because the planning was conducted by vertically integrated firms, it was straightforward to trade off generation and transmission costs, i.e., the added expense of building transmission to access cheaper sources of remote generation versus the higher cost of building and operating generation closer to load.

Eric Hirst and Brendan Kirby, *Transmission Planning and the Need for New Capacity*, National Transmission Grid Study Issue Paper, at D-6, https://eta-publications.lbl.gov/sites/default/files/trans-planning-new-capacity.pdf [hereinafter Planning and Need].

187. Planning and Need, *supra* note 186, at D-18 (stating that "industry experts believe that the distinction between reliability and commerce in transmission planning is increasingly irrelevant" because "reliability problems are also commercial problems" but others find the distinction relevant in part because it might inform who pays for the solution).

188. For an explanation of transmission congestion, *see* note 175.

189. Order No. 1000, 136 F.E.R.C. ¶ 61,051 (2011) [hereinafter Order No. 1000]; New York Independent System Operator, *Transmission Expansion in New York State: A New York ISO White Paper*, 4-1 (Nov. 2008) (filed in FERC Docket No. 0A08-52, Attachment A to Answer of New York Regional Interconnect, Motions of New York Independent System Operator and the Companies, Dec. 16, 2008) [hereinafter NYISO White Paper]:

> [I]n the RTO/ISO era, transmission investment is driven primarily to maintain and enhance reliability, with some consideration of economic and market efficiency purposes. Looking forward, it appears that transmission may need to be planned to meet objectives other than reliability and economics – namely, public policy objectives driven by environmental and fuel diversity concerns. The incorporation of desired attributes other than system reliability and market economics represents a significant change for the transmission industry.

190. *See, e.g., New England Power Pool Participants, et al.* 52 F.P.C. at p. 410 (1974) (discussing a "coal-by-wire" program that required utilities to transmit coal-fired power to New England utilities, which relied on oil power. While this short-term program did not include construction of new transmission, it was only possible because the utility systems were already interconnected); NYISO White Paper, *supra* note 189, at 4-5 ("Transmission can provide significant fuel diversity benefits to this region . . . .").

options to use the transmission system in ways that were not originally envisioned."[191] Unexpected benefits can eclipse the original purposes the transmission expansion was intended to serve by enabling the network to adjust to unanticipated fuel price changes, economic volatility, new environmental requirements, outages, and natural disasters.[192]

Transmission planning aims to incorporate information about system conditions, expected load growth, anticipated generation expansion, regulatory requirements, and available technologies. Planners use computer models to understand system responses to various expansion options.[193] Model results, as well as information about project costs, environmental effects, and regulatory requirements, inform planners' assessments of different projects.[194] Planners also consider alternatives, such as demand-side technologies that can reduce flows of energy on the interstate network and thereby obviate the need for additional infrastructure.[195] Ultimately, planners assess the tradeoffs among various projects and create a plan for expansion. Planning is a "fundamentally difficult problem because transmission lines are costly, long-lived assets that must be built despite considerable uncertainty about future technology, policies, demand, and supply."[196]

In the industry's earlier eras, vertically integrated IOUs retained nearly all of the relevant planning information.[197] An IOU not only owned and operated the transmission network and all (or nearly all) of the generation within its state-

191. U.S. DEP'T OF ENERGY, NATIONAL ELECTRIC TRANSMISSION CONGESTION STUDY, at 11 (Sept. 2015), https://www.energy.gov/sites/prod/files/2015/09/f26/2015%20National%20Electric%20Transmission%20Congestion%20Study_0.pdf [hereinafter DOE Congestion Study]; Budhraja, *supra* note 186, at 54 (finding that analytical methods used in planning processes "do not capture the many strategic benefits of high-voltage electricity transmission projects, such as those resulting from the long life of projects, dynamic changes to the system, access to diverse fuels, mitigation of risks as a form of insurance against extreme events, and advancement of public policy goals").

192. DOE Congestion Study, *supra* note 191, at 11; 1964 NATIONAL POWER SURVEY, *supra* note 44, at 211 ("The value of a strong transmission network lies in the flexibility it offers for meeting large variations in loads . . . and the ability to share diversities and reserves. . . . An adequate network will facilitate the adjustment that invariably is required for miscalculations of load growth, emergencies, or sudden changes in major loads . . . ."); Planning and Need, *supra* note 186, at D-2.

193. Planning and Need, *supra* note 186, at D-2; Scoping Project, *supra* note 186, at 8.

194. Planning and Need, *supra* note 186, at D-2.

195. Shelley Welton, *Non-Transmission Alternatives*, 39 HARVARD ENVTL. L. REV. 457, 464–470 (2015).

196. Comment of the Staff of the Federal Trade Commission, FERC Docket No. AD12-9 (June 14, 2009). As just one example, the magnitudes of cost shifts and efficiency gains due to congestion relief are uncertain. *See, e.g.,* Planning and Need, *supra* note 186, at D-19 (stating that uncertainties relate to load growth, price responsiveness of load, fuel costs, additions and retirements of generation, exercise of market power by generators, and transmission pricing); *id.* at D-9 (showing congestion costs in New England under different assumptions about these factors); NYISO White Paper, *supra* note 189, at 5-2 ("Large transmission projects can shift bidding behavior, making predictions about price impacts difficult. Over the longer term, the cost and benefits identified with a transmission expansion can shift due to" several factors).

197. Planning and Need, *supra* note 186, at D-6; Joseph H. Eto, *Planning Electric Transmission Lines: A Review of Recent Regional Transmission Plans*, LAWRENCE BERKELEY NAT'L LAB, at 16 (Sept. 2016) https://www.energy.gov/sites/prod/files/2017/01/f34/Planning%20Electric%20Transmission%20Lines--A%20Review%20of%20Recent%20Regional%20Transmission%20Plans.pdf [hereinafter Review of Recent Regional Plans] ("Prior to the formation of ISO/RTOs, the existing transmission owners were, in effect, the sole or primary entities responsible for developing projects within their footprints and for coordinating with one another . . . to develop projects that involved more than one entity's system.").

granted service territory, it was also the authoritative source for generation and load forecasts, transmission cost projections, and assessments of available technologies. IOUs planned for themselves — to connect to their own power plants (or plants they had contracted with) and to their own wholesale customers and retail ratepayers. IOUs built planned projects themselves, financing expansion through cost-of-service rates paid by captive consumers.

Following the Open-Access orders, IOUs lost their monopolies on planning-relevant information. Actions by non-IOUs, such as independent generators that intended to develop new projects and TDUs that were no longer captive IOU customers, could significantly affect transmission needs. Including non-IOUs in transmission planning was necessary to ensure that assessments of system needs matched market participants' plans and reflected viable options. Input from state regulators, ratepayer advocates, environmental groups, and other stakeholders may help gauge whether particular projects might receive siting permission and be relevant to assessing tradeoffs among planning criteria. As examples, upgrades that enhance reliability may raise rates, projects that bring regional benefits may have adverse local environmental impacts, and congestion mitigation can cause certain parties to lose money.[198]

Weighing these tradeoffs and incorporating information from stakeholders that may have opposing interests is complex. Because IOUs are themselves interested parties and have incentives that diverge from their customers, competitors, and policymakers, they are not capable of acting as neutral arbiters in transmission planning processes. Like any profit-driven company, IOUs seek to use their strategic advantages to advance their own interests. In a complicated transmission planning process, an IOU might use its informational advantages and position as the dominant local transmission owner and developer to block projects that harm its interests or to advance projects that benefit it financially but harm others.

For example, the American Antitrust Institute (AAI) has hypothesized several scenarios where an IOU might block transmission developments that would benefit ratepayers or the IOU's competitors. A congestion-relieving project, even one that would reduce rates paid by its own captive consumers, might harm the IOU if it owns generation that benefits from the congestion or holds financial instruments tied to the congestion.[199] Similarly, an IOU might have an incentive to

198. U.S. DEP'T OF ENERGY, NATIONAL TRANSMISSION GRID STUDY, at 52 (May 2002), https://eta-publications.lbl.gov/sites/default/files/doe-natl-trans-grid-study.pdf [hereinafter National Grid Study] ("This input is especially needed to support the identification and assessment of tradeoffs among planning criteria"); *Id.* ("Access to operational data is essential to allow market participants to formulate and evaluate viable proposals"); Planning and Need, *supra* note 186, at D-20 (explaining that consumers on the low-cost side of the transmission constraint and generators on the high-cost side of the constraint may lose money from congestion-relief).

199. Amicus Brief of the American Antitrust Institute in Support of Petitioner, *New York Regional Interconnect v. FERC*, Docket 09-1309, at 16 (D.C. Cir. Jul. 29, 2010) [hereinafter AAI Brief]; *see also PJM Interconnection,* 124 F.E.R.C. ¶ 61,187 (2008) (rejecting notion that a planning process must allow an IOU to veto a project that is cost beneficial from the regional perspective but harmful to the IOU's own financial interest); *New York Indep. Sys. Operator*, 129 F.E.R.C. 61,045 (2009) (Moeller, dissenting):

> Under the NYISO's supermajority voting provision, certain beneficiaries of the proposed project may find it in their interest to vote against a transmission line in order to preserve or increase their own

block transmission projects that would enable competing retailers to access low-cost generation that the IOU may already be able to access through a long-term agreement.[200] FERC has developed similar hypotheses.[201]

Apart from their interests in wholesale power, IOUs might also seek to block projects in order to maintain their monopolies over local transmission. A New York ISO white paper posits that "utilities will protect their franchise areas, a valuable and exclusive asset, and are loathe to allow competitors' [transmission] projects through their areas without some control and participation."[202] AAI claims that because the development of one transmission project may foreclose alternatives, an IOU may attempt to block a competing project in order to boost its own alternative.[203] IOUs also compete with non-IOU developers in "more subtle ways" by providing "yardstick competition."[204] A non-IOU project that is less expensive than IOU projects may put pressure on a utility by alerting regulators that the IOU is not the least-expensive transmission developer.[205]

Oversight should restrain IOUs' incentives and abilities to use their informational and regulatory advantages to prioritize their own financial goals. As I describe in Part IV.C, FERC has thus far adopted two approaches. For all transmission planning, it has instituted procedural reforms that aim to counteract IOUs' advantages linked to their historic monopolies on transmission development within their state-granted service territories. For planning regionally beneficial projects whose costs are borne by more than one transmission owner, FERC has partially displaced the IOU as the planning decision maker. Where RTOs operate the network, they are also responsible for developing regional expansion plans. Elsewhere, IOU-controlled organizations generate regional plans.

As I describe below, FERC's transmission planning reforms follow numerous efforts to encourage IOUs, pursuant to section 202, to coordinate their planning. Ultimately, FERC shifted to a mandatory approach under section 206, linking its reforms to its duty to ensure just and reasonable and not unduly discriminatory rates. FERC justified its planning rules by pointing to its well-established conclusion that IOUs will act in their own self-interest to the detriment of consumers and competitors if left unchecked. I see another reason for robust FERC oversight of planning.

> revenues or profits even if the project would yield net benefits in New York. For instance, a Transmission Owner (TO) holding valuable Transmission Congestion Contracts may choose not to support a congestion-reducing project because it financially benefits from existing levels of congestion.

Timothy J. Brennan, *Resources for the Future, "Alleged Transmission Undersupply: Is Restructuring the Cure or the Cause?"* at 6 (Oct. 2005), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=851804 (noting that financial transmission rights may vest holders with "an interest in limiting [transmission] capacity to profit from congestion rents").

200. AAI Brief, *supra* note 199, at 18.

201. Order No. 890, *Preventing Undue Discrimination and Preference in Transmission Service*, 118 F.E.R.C. ¶ 61,119, at PP 422–24 (2007) [hereinafter Order No. 890].

202. NYISO White Paper, *supra* note 189, at 4–7; 1970 NATIONAL POWER SURVEY, *supra* note 44, at I-17-25 ("Joint ownership of transmission systems is less widespread than jointly owned generation because most electric utilities prefer to own all transmission facilities within their own service area.").

203. AAI Brief, *supra* note 199, at 20.

204. *Id.*

205. *Id.* at 20–21.

For more than a century, IOUs have enjoyed transmission monopolies within their state-granted service territories. A fundamental pillar of the IOU business model is to build more transmission in their exclusive retail footprints.[206] As their local networks age, IOUs may find that the simplest paths forward for maintaining reliability, as well as the easiest for supporting their financial returns, are in replacing aging infrastructure or supplementing it with new or reconductored local lines.[207] Rebuilding twentieth century infrastructure may be a viable solution for keeping the lights on, but it neglects the innovative potential of twenty-first century technologies and is unlikely to be the most cost-effective solution for decarbonizing the nation's power networks.

IOUs are generally incentivized to disfavor new technologies, including demand-side solutions and high-tech operational practices, that might obviate the need for additional transmission infrastructure,[208] in part because they are not as predictably profitable under the cost-of-service business model.[209] Consideration of twenty-first century technologies, ranging from distributed storage to software optimization tools, should be a fundamental component of transmission planning. Advancing this non-traditional infrastructure may require new planning approaches that seem to me unlikely to come from local monopolists. In addition, as the resource mix evolves, new types of transmission projects — regional and perhaps even continental in scale, and utilizing direct current technology — may be the optimal means for cost-effectively integrating wind and solar generation.[210] IOUs' incentives to prioritize development in their state-protected service territo-

206. AAI Brief, *supra* note 199, at 21.

207. *Id.*

208. Welton, *supra* note 195, at 464–70, 486–504 (2015) (describing consumer-facing technologies collectively referred to as "non-transmission alternatives"); T. Bruce Tsuchida & Rob Gramlich, *Improving Transmission Operation with Advanced Technologies: A Review of Deployment Experience and Analysis of Incentives*, at 6–15 (June 24, 2019), https://gridprogress.files.wordpress.com/2019/06/brattle-grid-strategies-paper-improvingtransmissionoperationwithadvancedtechnologies.pdf (outlining operational practices enabled by communications and computing technologies that can increase transmission transfer capability).

209. Welton, *supra* note 195, at 486–504; Tsuchida & Gramlich, *supra* note 208, at 20–22; Rob Gramlich, WATT Coalition, *Bringing the Grid to Life: White Paper on Benefits to Customers of Transmission Management Technologies*, at 7–9 (Mar. 2018), https://gridprogress.files.wordpress.com/2019/08/bringing-the-grid-to-life-white-paper-on-the-benefits-to-customers-of-transmission-management-technologies.pdf (explaining that investment decisions are infected by "capital bias" that makes operational enhancements unattractive).

210. Numerous studies have found that significant investments in transmission are needed to cost-effectively integrate zero emission resources. *See, e.g.*, Jesse D. Jenkins, Max Luke, and Samuel Thernstrom, *Getting to Zero Carbon Emissions in the Electric Power Sector*, 2 JOULE (Issue 12) 2487, 2506, 2508 (Dec. 19, 2018) (reviewing forty deep decarbonization scenarios, noting that several scenarios "envision tens of thousands of miles of new high-voltage direct-current transmission linking all regions in the United States," and summarizing that "all scenarios benefit from cost-effective demand flexibility and transmission expansion"); Patrick R. Brown & Audun Botterud, *The Value of Inter-Regional Coordination and Transmission in Decarbonizing the US Electricity System*, 5 JOULE (Issue 1) 115 (Jan. 20, 2020) ("using a co-optimized capacity-planning and dispatch model over seven years of hourly operation [and] show[ing] that inter-state coordination and transmission expansion reduce[s] the system cost of electricity in a 100%-renewable US power system by 46% compared with a state-by-state approach"); Armando L. Figueroa-Acevedo, Jordan Bakke, Harvey Scribner, Ali Ardakani, Hussam Nosair, Abhinav Venkatraman, James McCalley, Aaron Bloom, Dale Osborn, P. Caspary, and James Okullo, *Design and Valuation of High-Capacity HVDC Macrogrid Transmission for the Continental US*, IEEE TRANSACTIONS ON POWER SYSTEMS (2020).

ries bias them against large-scale projects, particularly high-efficiency direct current lines that don't neatly integrate with existing alternating current infrastructure. Although a hypothetical "Supergrid," or "Smartgrid" is not my focus, it is evident that the current IOU-centric development paradigm is incompatible with construction of continental-scale transmission and deployment of technologies that might obviate the need for IOUs' local transmission spending.

B. FERC Encourages Voluntary Planning and Merchant Transmission

By the 1960s, FERC recognized that encouraging joint planning was a key element of its duty under section 202.[211] At the time, most coordinated planning centered on generation,[212] a focus that tracked IOUs' investments and cost-recovery priorities.[213] One notable exception was planning for seasonal energy exchanges, which often required long-distance transmission.[214] While FERC approved numerous coordination agreements, many of which included provisions about joint transmission planning, its orders approving those agreements do not discuss the provisions that outline transmission planning procedures.[215]

As FERC began exploring how to facilitate competitive power markets, it understood that IOU transmission planning could be hindering wholesale market

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211. *See, e.g.,* 1964 NATIONAL POWER SURVEY, *supra* note 44, at 1 ("The Survey is thus encouraging the industry to initiate broader regional and interregional planning. . . . In short, the Survey was conducted by the Commission as the most effective means of carrying out the provisions of section 202(a)."); *Pacific Gas & Elec. Co.*, 49 F.P.C. 1103, at p. 1105 (1974) (characterizing its "policies and practices" under 202(a) as "designed to afford all electric systems opportunity for coordination regional bulk power supply planning"); *Reliability and Adequacy of Electric Service – Reporting Data*, 56 F.P.C. 3547, at p. 3548 (1976) ("Long-range planning is an indispensable element to the accomplishment of the objective of section 202(a)."). *But see*, Order No. 1000, *supra* note 189, at PP 101, 105 (rejecting the focus on coordination in FERC's understanding of 202(a)); Order No. 1000-A, *Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities*, 139 F.E.R.C. ¶ 61,132, at PP 123–52 (2012) [hereinafter Order No.1000-A].

212. 1979 NATIONAL POWER GRID STUDY, *supra* note 51, at 42 (observing that prior to the mid-1960s capacity planning "was a relatively simple and straightforward task. New generating and transmission facilities would be ordered based on projected load growth, and new fossil-fired plants were brought online three to five years after the decision to order them."); *Re Western Mass. Elec. Co.*, 39 F.P.C. 723, at p. 736 (1968) (noting that the "stated purposes" of regional council of IOUs included "to promote in New England the continued coordination of economic operation of existing generating facilities [and] to promote over-all planning for the integrated and balanced expansion of new generating plants").

213. In 1980, for example, generation accounted for about 50% of IOU gross plant in service and 80% of annual operation and maintenance expenses. JOSKOW & SCHMALENSEE, *supra* note 16, at 46 (citing U.S. Department of Energy, Energy Information Administration, Statistics of Privately Owned Electric Utilities in the United States, 1980 Annual). Today, across the industry, transmission accounts for less than 20% of annual IOU capital spending. EDISON ELEC. INST., ELECTRIC POWER INDUSTRY OUTLOOK, at 23 (Feb. 5, 2020, https://www.eei.org/issuesandpolicy/finance/wsb/Documents/2020_Wall_Street_Final_Slides_Web.pdf).

214. For example, IOUs in the Southwest Power Pool region built 1,140 miles of high-voltage lines to enable exchanges with the Tennessee Valley Authority that parties agreed to in 1964. Power Pooling in the U.S., *supra* note 16, at 125. The Pacific Northwest-Southwest Intertie, with a delivery capacity of 1.4 GW, was developed to market surplus hydro from the northwest and deliver California thermal energy to the northwest during low hydro periods. *Id.* at 139, 151. In the upper Midwest, utilities built a high-voltage network linking major load areas in ten states. *Mid-Continent Area Power Pool*, 58 F.P.C. 2622, at p. 2646 (1977).

215. *See, e.g., New England Power Pool Agreement*, 48 F.P.C. 538, at pp. 546-49 (1972). *Mid-Continent Area Power Pool Agreement,* 48 F.P.C. 607 (1972). *See also Boston Edison Co.*, 44 F.E.R.C. ¶ 61,199, at p. 61,707–08 (1988) (noting that NEPOOL participants coordinate transmission planning but that IOUs build transmission to serve their own loads).

development.[216] To address this barrier, in 1993, FERC issued a policy statement that "encouraged" utilities to develop Regional Transmission Groups (RTGs).[217] FERC hoped that RTGs would be "collaborative mechanisms"[218] for utilities and their wholesale customers to "coordinate their transmission planning more effectively" and cooperate on certain operational matters.[219] Seeking to encourage RTG participation, FERC provided "considerable flexibility" in the content of RTG agreements but outlined seven necessary components.[220] With regard to planning, an RTG agreement must facilitate "the development of a coordinated transmission plan on a regional basis and the sharing of transmission planning information" that accounts for the needs of non-members and interconnected regions.[221]

Shortly thereafter, FERC's Open-Access orders overtook its push for RTG formation.[222] Nonetheless, the RTG guidelines mark a turning point in FERC's approach to encouraging coordination. Rather than relying on ad-hoc utility arrangements, FERC defined a form of coordination that it would deem acceptable and then evaluated IOU filings against its guidelines.[223] Because FERC determined that RTG agreements would affect or relate to transmission rates, FERC reviewed proposed arrangements under section 205 standards.[224] If a proposed plan failed to conform to FERC's guidelines, FERC would reject it as unjust and unreasonable or unduly discriminatory. FERC would later replicate this approach with its ISO and RTO guidance.

Order No. 888 changed little about FERC's approach to transmission planning. FERC acknowledged that IOUs had generally not allowed their wholesale customers to participate in planning processes,[225] but it rejected imposing any planning mandate as beyond the scope of the proceeding.[226] Instead, FERC "encouraged" utilities to engage in joint planning[227] or to join an ISO, RTG, or "other

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216. Transmission Task Force, *supra* note 87, at 173–74 (noting that that in the absence of any federal policy IOUs might "restrict the available capacity as a way to increase the price of either short-term or long-term service or as a way to reduce service options of competitive buyers and sellers"); *Id.* (noting that state regulators could allocate benefits of IOU market power between the utility and its captive ratepayers, to the detriment of competitors and out-of-state consumers). *See also* Stalon & Lock, *supra* note 80, at 450 (noting that with greater wholesale competition state utility regulators "were less able to use their distribution monopoly power to achieve various social objectives").

217. FERC, *Policy Statement Regarding Regional Transmission Groups*, 58 Fed. Reg. 41,626, 41,627–28 (Aug. 5, 1993) [hereinafter RTG Policy Statement] (noting that while RTGs were proposed in Congress during debates about the Energy Policy Act of 1992, those provisions were not enacted).

218. *Id.* at 41,631.

219. *Id.* at 41,628.

220. *Id.* at 41,629.

221. *Id.* at 41,630. In proceedings about utility proposals, FERC clarified that "coordinating" planning required more than merely compiling utility plans, *Southwest Reg'l Transmission Ass'n*, 69 F.E.R.C. ¶ 61,100, at p. 61,399–400 (1994); *Western Reg'l Transmission Ass'n*, 69 F.E.R.C. 61,381, and reiterated that the "primary purpose" of RTG planning is to "negotiate and carry out a single unified" regional transmission plan.

222. FERC approved only three RTGs. *Northwest Reg'l Transmission Ass'n*, 71 F.E.R.C. ¶ 61,397 (1995).

223. RTG Policy Statement, *supra* note 217, at 41,631.

224. *Id*. at 41,632.

225. Order No. 888-A, *supra* note 107, at 12,330.

226. *Id.* at 12,352.

227. *Id.*

regional entity that has an open planning process."[228] FERC expected ISOs to "have a clear and prominent role in the transmission expansion process,"[229] that included conducting the necessary studies to identify the need for transmission expansion,[230] but it approved processes that left IOUs with considerable control.[231] FERC overlooked arguments that an IOU-dependent planning process would enable the exercise of "dynamic market power" that arises from each IOU's ability to manipulate transmission expansion to benefit its own power marketing interests.[232] FERC also rejected proposals to require ISOs to open all transmission expansion projects to competitive bidding.[233]

In Order No. 2000, FERC purported to build on the "prominent role" it envisions for ISOs and RTGs.[234] It required RTOs to have the "ultimate responsibility for both transmission planning and expansion," and stated that independence from market participants is a "necessary condition" for effective planning.[235] But transmission planning was clearly not FERC's priority in Order No. 2000. It allowed RTO proposals to punt on the details of transmission planning, requiring only that filings include "specified milestones" to performing this function within three years of initial operation.[236]

In orders reviewing RTO proposals, FERC aspired to empower RTOs in their planning processes. It said that RTOs must "independently oversee the regional transmission plan and solely determine the priority of transmission planning projects."[237] FERC rejected the notion that RTO planning should be merely "a collection of traditional expansion plans developed by individual [transmission owners] and assembled by the RTO after confirming that they serve reliability

228. *Id.* at 12,330.

229. *Pacific Gas & Elec.*, 77 F.E.R.C. ¶ 61,204, at p. 61,835 (1996).

230. Order No. 888, *supra* note 31, at 21,596 (requiring ISO or RTG to "conduct such studies as may be necessary to identify . . . appropriate expansion"); Order No. 888-A, *supra* note 107, at 12,318.

231. *PJM Interconnection*, 81 F.E.R.C. ¶ 61,257, at p. 62,275 (1997) (approving an ostensibly ISO-led planning process that relied on IOUs to supply staff, data, and technical systems).

232. Sacramento Public Utility District, Testimony of Dennis W. Carlton, FERC Docket No. ER96-1663, Sep. 13, 1996, at 5–6 (testifying that the IOUs focus on "static market power" and "fail to analyze whether they will have an economic incentive" and an "ability" to "block or delay economically efficient [transmission] expansion" and concluding that their ISO governance proposal would allow them to do so); Sacramento Public Utility District, Testimony of Gustavo E. Bamberger, FERC Docket No. ER96-1663, Jan. 17, 1997, at 5–6:

> It is important to remember that the logic of establishing the ISO reflects an attempt to 'delink' the ownership of generation and transmission assets. If that is the goal of the ISO in a static environment (i.e., given the current capacity and location of transmission assets), it seems reasonable to pursue that goal in a dynamic sense as well. That is, if one of the reasons for establishing an ISO is to remove or reduce a transmission owner's ability to favor its own generation today, it seems reasonable to structure the ISO in a way that removes or reduces the same transmission owner's ability to affect transmission grid expansion decisions in ways that will benefit its own generation in the future. Thus, I am in favor of allowing the ISO to play an active and substantial role in transmission grid expansion decisions.

233. *Pacific Gas & Elec.,* 80 F.E.R.C. ¶ 61,128, at p. 61,433 (1997).

234. *Pacific Gas & Elec.*, 77 F.E.R.C. ¶ 61,204, at p. 61,835; Order No. 2000, *supra* note 36, at pg. 202.

235. *Id.* at pgs. 199–200.

236. *Id.* at pg. 201.

237. *Southwest Power Pool*, 106 F.E.R.C. ¶ 61,110, at P 188 (2004).

needs."[238] Rather, the RTO should pursue projects that "make generation markets more competitive," by, for example, alleviating congestion that may enhance generator market power.[239] FERC pushed back on IOU privileges, determining that RTOs may not grant transmission owners rights to screen projects prior to the RTO's consideration[240] and selectively rejected RTO proposals to grant IOUs rights-of-first refusal (ROFR) to construct projects identified in the RTO plan.[241] FERC also sought to involve non-IOUs in the planning process by ensuring that stakeholders could participate,[242] ordering transparency "so that all market participants will have confidence that the process is fair and efficient,"[243] and attempting to provide opportunities for non-IOUs to develop projects in the regional plan.[244]

FERC was optimistic that the central-planning development model, whether led by an IOU or RTO, would be replaced by "well-defined transmission rights and efficient price signals" that would facilitate market-driven expansion.[245] Such merchant projects would "not have the economic safety net of assured cost recovery"[246] from captive ratepayers as IOUs had always enjoyed through FERC-approved cost-based rates. Initially, FERC expected that merchant development

238. *PJM Interconnection*, 96 F.E.R.C. ¶ 61,061, at p. 61,240; *Arizona Pub. Serv. Co.*, 101 F.E.R.C. 61,033, at P 212 (2002); *see also Southwest Power Pool*, 106 F.E.R.C. ¶ 61,110**,** at P 188 (2004); *Cleco Power*, 101 F.E.R.C. ¶ 61,008, at P 119 (2002).

239. *PJM Interconnection*, 96 F.E.R.C. ¶ 61,061, at p. 61,240 (citing *GridFlorida*, 94 F.E.R.C. ¶ 61,363, 62,367 (2001)); *Midwest ISO*, 97 F.E.R.C. 61,326, 62,520 (2001).

240. *PJM Interconnection*, 96 F.E.R.C. ¶ 61,061, at p. 61,240; *New York ISO, et al.*, 96 F.E.R.C. ¶ 61,059 at p. 61,203 (2001); *Carolina Power & Light Co.*, 94 FERC 61,273, at p. 62,009 (2001); *Southwest Power Pool*, 106 F.E.R.C. ¶ 61,110, at P 188.

241. *PJM Interconnection*, 96 F.E.R.C. ¶ 61,061, at p. 61,241; *Cleco Power*, 101 F.E.R.C. ¶ 61,008, at P 117; *Carolina Power & Light Co.*, 94 F.E.R.C. ¶ 61,273, at p. 62,010, *order on reh'g*, 95 F.E.R.C. ¶ 61,282, at p. 61,996 (2001); *Arizona Pub. Serv. Co*, 101 F.E.R.C. ¶ 61,033, at P 212, *order on reh'g*, 101 F.E.R.C. ¶ 61,350, at PP 65–66 (2002); *Southwest Power Pool*, 111 F.E.R.C. ¶ 61,118, at P 79 (2005), *order on reh'g*, 112 F.E.R.C. 61,319, at P 48 (2005). As discussed in the next section, MISO, PJM, SPP, and ISO-NE all had ROFRs in their tariffs.

242. *Alliance Cos.*, 96 F.E.R.C. ¶ 61,052, 61,144 (2001); *PJM Interconnection*, 96 F.E.R.C. ¶ 61,061, at pp. 61,240**–**41; *Translink Transmission Co.*, 101 F.E.R.C. 61,140, at P 58 (2002); *ISO-NE*, 106 F.E.R.C. ¶ 61,280, at P 213 (2004).

243. *GridFlorida*, 94 F.E.R.C. ¶ 61,363, at p. 62,367.

244. *PJM Interconnection*, 96 F.E.R.C. ¶ 61,061, at p. 61,241; *Midwest ISO*, 97 F.E.R.C. ¶ 61,326, at p. 62,520 (2001); *Carolina Power & Light Co.*, 94 F.E.R.C. ¶ 61,273, at p. 62,009; *ISO-NE*, 109 F.E.R.C. ¶ 61,147, at P 159 (2004).

245. Order No. 2000, *supra* note 36, at pg. 200. (The Department of Energy was also bullish on market-based transmission expansion. In its 2002 National Transmission Grid Study it proclaimed that "[t]he goal of RTO planning should be to identify transmission needs and the criteria for evaluating proposed solutions, and then to empower the market to respond to these needs, including, if necessary, support for market solutions in state regulatory proceedings.") National Grid Study, *supra* note 198, at 51. (RTOs too were optimistic that market-based approaches would supersede administrative planning. PJM told FERC that under its proposed planning process it would "not propose construction of a transmission upgrade until it has exhausted the possibility that the market will produce a solution to congestion or similar market failures. . . . Only when these two conditions are satisfied - that a transmission upgrade would be the economically best solution, and the market has not produced a solution - will PJM 'intervene.'"); *PJM Interconnection*, 104 F.E.R.C. ¶ 61,124, at P 32 (2003).

246. *TransEnergie U.S.*, 91 F.E.R.C. ¶ 61,230, at p. 61,836 (2000) (quoting the company's filing in Docket No. ER00-1).

would be driven by energy market price differentials, with developers earning revenue either from tradable financial or physical transmission rights or by moving energy from a low-priced region to a high-priced region.[247] In 2000, FERC granted a developer "negotiated rate authority" for the first time, reasoning that because no customer would pay more than the energy price differentials between the line's two terminals, the rate would be effectively capped.[248] In subsequent proceedings, FERC purported to be flexible in its review of developers' applications, stating that it aimed to "assist merchant transmission providers in exploring innovative methods for adding transmission to the power grid and for securing the financing needed for such projects."[249]

In 2009, FERC substantially changed its review criteria in response to growing interest in a different merchant model where the developer earns revenue from selling capacity to subscribing generators.[250] FERC's new policy allowed merchant developers to negotiate with customers for transmission capacity, rather than requiring developers to auction all capacity as it had mandated in prior orders.[251] FERC concluded that allowing developers to negotiate for capacity would improve projects' prospects for obtaining financing and actually being built.[252]

Initially, FERC saw merchant transmission as a mechanism for "expanding competitive generation alternatives for customers"[253] that could complement its reforms designed to unleash competitive generation. But merchant transmission could have also mitigated IOU transmission dominance by providing a pathway for transmission developers outside of the centrally planned, cost-of-service model that had been controlled by IOUs. Merchant projects might have obviated the need for additional IOU-developed infrastructure and provided so-called yardstick competition by revealing to regulators that transmission could be developed at a lower cost than IOUs had been providing it.

In practice, despite FERC's efforts to craft a regulatory path forward for merchant projects, these projects are relatively rare.[254] In general, IOUs build all transmission projects located in their retail service territories, including segments of projects that span across more than one IOU territory. Where an RTO determines that a project will benefit multiple IOUs in the region, each IOU pays a share of

247. Paul L. Joskow, MIT Center for Energy and Environmental Policy Research, Working Paper, *Competition for Electric Transmission Projects in the U.S.: FERC Order 1000*, at 3–6 (Mar. 2019), http://ceepr.mit.edu/files/papers/2019-004.pdf (describing the merchant models).

248. Heidi Werntz, *Let's Make a Deal: Negotiated Rates for Merchant Transmission*, 28 PACE ENVTL. L. REV. 421, 443–48 (2011) (discussing *TransEnergie U.S.*, 91 F.E.R.C. ¶ 61,230).

249. *Neptune Reg'l Transmission Sys.,* 103 F.E.R.C. ¶ 61,213, at P 18 (2003); Werntz, *supra* note 248, at 453–56 (discussing "transitional" proceedings).

250. *Chinook Power Transmission*, 126 F.E.R.C. ¶ 61,134, at P 2 (2009) (describing proposed line that would transmit renewable energy).

251. Werntz, *supra* note 248, at 453–55 (citing *Chinook Power Transmission*, 126 F.E.R.C. ¶ 61,134).

252. *Id.* at 453–56; *Allocation of Capacity on New Merchant Transmission Projects and Cost-Based, Participant Funded Transmission Projects*, 142 F.E.R.C. ¶ 61,038 (2013).

253. *TransEnergie U.S.*, 91 F.E.R.C. ¶ 61,230, at p. 61,838.

254. Joskow, *supra* note 247, at 4–6 (observing that few projects adopted the LMP-based model); *Id.* at 24–25 (identifying four LMP-based projects that connect to New York).

the project costs commensurate with the benefits it is expected to receive.[255] Projects planned by an RTO are paid for through cost-of-service rates.[256]

IOUs deserve some of the blame for the dearth of merchant projects, particularly with regard to the later "pipeline" model projects. As other industry experts have documented, merchant developers have had difficulties siting their projects.[257] States site nearly all transmission, and many states implement siting laws and regulations that are biased in favor of IOU projects and may even prohibit non-IOU transmission development.[258] IOUs have actively opposed merchants, no doubt seeking to protect their local monopolies.[259] Merchant projects must also navigate the IOU-dominated interconnection process.[260]

C. FERC Mandates Planning Procedures for Cost-of-Service Transmission Development

Following the demise of SMD in 2005, FERC refocused its attention on its Open-Access mandate. In Order No. 890, its first major order after it terminated SMD, FERC reached the now-familiar conclusion that "opportunities for undue discrimination [by IOUs] continue to exist."[261] Among several problems it identified with OATTs, FERC concluded that they contained "only minimal requirements regarding transmission planning."[262] FERC found that, because it could not "rely on the self-interest of transmission providers to expand the grid in a nondiscriminatory manner," it would formalize planning processes to ensure that IOU transmission development supported competitive wholesale power markets.[263]

Building on its statements in RTO compliance orders, FERC required transmission providers to amend their OATTs with transmission planning procedures that would "provide for the timely and meaningful input and participation of all

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255. *See*, *e.g.*, Illinois Commerce Comm'n. v. FERC, 721 F.3d 764 (7th Cir. 2013).

256. *See*, *e.g*,., *Primary Power,* 131 F.E.R.C. ¶ 61,015, at PP 67–72 (2010).

257. *See, e.g.,* Alexandra B. Klass & Jim Rossi, *Revitalizing Dormant Commerce Clause Review for Interstate Coordination*, 130 MINN. L. REV. 129, 187–88 (2015).

258. *Id.*; *See also*, *e.g.*, Alexandra B. Klass, *Takings and Transmission*, 91 N. CAROLINA L. REV. 1079 (2013).

259. *See, e.g.*, Brief of Respondent-Appellee Commonwealth Edison at 43, Illinois Landowners All. NFP v. Illinois Commerce Comm'n, 90 N.E.3d 448 (Ill. 2017) (No. 121302) (urging the court to reverse regulators' finding that a merchant developer was a "public utility" under Illinois law).

260. *See infra* note 420.

261. Order No. 890, *supra* note 201, at PP 26, 39, 422–25 (repeating conclusions from Order No. 888 and finding that existing tariffs do not counteract IOUs' incentives to plan for themselves); *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."); Order No. 2003, 68 Fed. Reg. 49,845 at PP 11–12 (Aug. 19, 2003).

262. Order No. 890, *supra* note 201, at PP 52, 57, 420 ("Order No. 888-A did not, however, require that transmission providers coordinate with either their network or point-to-point customers in transmission planning or otherwise publish the criteria, assumptions, or data underlying their transmission plans. The Commission also did not require joint planning between transmission providers and their customers or between transmission providers in a given region.").

263. *Id*. at PP 52, 57, 422 ("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."), 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.").

interested customers" and other stakeholders.[264] Comparability and transparency once again guided FERC's reforms. Order No. 890 requires transmission providers to plan for the needs of their customers on a comparable basis as they plan for their own needs.[265] To implement this comparability mandate, transmission providers must collect the same type of information from their customers about their projected needs that providers use to plan for their own needs. Providers must also "consider" data and comments submitted by customers and stakeholders and treat similarly situated customers comparably in the planning process.[266] As it did in Order No. 888, FERC opened the black box of transmission information, requiring disclosure of basic methodology and criteria that providers use to develop transmission plans.[267]

As in Orders No. 888 and 2000, independence and regionalization were optional. Under Order No. 890, IOUs control the planning process and retain the final say on the content of their transmission plans.[268] FERC required transmission providers to "coordinate" planning with neighboring providers but only insofar as necessary to ensure simultaneous feasibility of each provider's individual plan and to "identify" projects that could relieve congestion or integrate new resources.[269] FERC did not require providers to collaborate on a unified regional plan or to pursue projects that would be more cost-effective than projects listed in each IOU's individual plan. Given their regional scope, however, RTOs were already developing regional plans, and complied with Order No. 890 by demonstrating that their planning processes met FERC's requirements.[270]

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264. Order No. 890, *supra* note 201, at P 454; *see also Southern Cal. Edison Co.,* 168 F.E.R.C. ¶ 61,170, at P 40 (2019) (explaining that "the undue discrimination at issue [in Order No. 890] is not the potential limitation on stakeholder advocacy per se, but rather the undue discrimination in transmission access that could occur without stakeholder advocacy").

265. *Id.* at PP 454, 494–95.

266. *Id*. at P 454 (stating that the planning process must "ensure that customers are treated comparably"); *id.* at P 486 (stating that "equivalent information must be provided by transmission customers to ensure effective planning and comparability); *id.* at 494; *PJM Interconnection,* 123 F.E.R.C. ¶ 61,163, at P 52 (explaining comparability principle as applied to planning).

267. *Id.* at PP 471–73.

268. Order No. 890-A, *Preventing Undue Discrimination and Preference in Transmission Service*, 121 F.E.R.C. ¶ 61,297 at PP 188–89 (2007).

269. Order No. 890, *supra* note 201, at PP 523–24.

270. *California Sys. Operator*, 143 F.E.R.C. ¶ 61,057, at PP 32, 35, 42, 54 (2013) (finding that the ISO's regional planning process already adopted Order No. 890's principles and complied with Order No. 1000's directive to identify regional solutions); *PJM Interconnection*, 142 F.E.R.C. ¶ 61,214, at PP 38, 52, 59, 65 (2013) (finding that PJM's regional planning process already adopted Order No. 890's principles and complied with Order No. 1000's directive to identify regional solutions); *Southwest Power Pool*, 144 F.E.R.C. ¶ 61,059, at PP 36, 39, 46, 52, 56 (2013) (finding that the SPP's regional planning process already adopted Order No. 890's principles and complied with Order No. 1000's directive to identify regional solutions); *ISO New England*, 143 F.E.R.C. ¶ 61,150, at PP 32, 45, 64 (2013) (finding that the ISO's regional planning process already adopted Order No. 890's nine principles and partially accepting revisions so it complies with Order No. 1000); *Midwest Indep. Transmission System Operator*, 142 F.E.R.C. ¶ 61,215, at PP 42, 47, 71, 80 (2013) (finding that the ISO's regional planning process already adopted Order No. 890's principles and accepting revisions so it identifies regional solutions in compliance with Order No. 1000); *New York Indep. Sys. Operator*, 143 F.E.R.C. ¶ 61,059, at PP 31, 42, 50, 56, 75 (2013) (finding that the ISO's regional planning process already adopted Order No. 890's principles and partially accepting revisions so it complies with Order No. 1000).

Despite incorporating the FERC-mandated planning principles, RTOs were seen by some industry participants as little more than a forum for evaluating IOU proposals in a process dominated by IOUs.[271] The ISO-NE planning process in effect until 2012 exemplifies a power pool-era paradigm of IOU-centered planning. Testimony filed at FERC by two IOU executives explains that ISO-NE's planning relied on a "level of intercompany planning coordination" that "dates back several decades."[272] The IOU executives described an iterative process between IOUs and ISO-NE that relied on IOUs working collaboratively with each other to do most of the analytical work that supports ISO-NE's planning decisions.[273] The IOU executives argued that their companies have the resources and expertise to perform the relevant studies, while the ISO "has much more limited resources and lacks the local knowledge of the [utilities] with respect to particular portions of the system."[274] Only after IOUs "share[d] their work with each other" in a process of "open collaboration, both among the [utilities] and between the [utilities] and the ISO's planning staff," did they then provide their results to non-IOU stakeholders.[275] The IOU executives warned that competition in transmission development would reduce collaboration and information flow, as utilities would be reluctant to share their intellectual property with competitors.[276]

In 2011, FERC determined that these sort of processes afford IOUs with "opportunities to engage in undue discrimination."[277] In Order No. 1000 — the most recent industry-wide rule on transmission planning — FERC employed several mechanisms to pry control over regional transmission development from IOUs and break the IOU-by-IOU planning model. First, the crux of the order is a mandate that IOUs collaborate within their region to evaluate transmission solutions that can meet the region's needs more efficiently than each provider's individual local plans.[278] FERC determined that merely confirming simultaneous technical

271. Comment of Pattern Transmission, FERC Docket AD09-08 (Nov. 23, 2009), at 7 (stating that in RTO planning processes there is "an almost unconscious assumption that transmission planning begins with incumbent transmission owners"); Comment of Green Energy Express, FERC Docket AD09-8 (Nov. 23, 2009), at 3 (stating that market participants in California have "concluded that transmission projects sponsored by independent transmission developers are not being fairly and fully considered by the CAISO, and only those projects sponsored by incumbent Participating Transmission Owners are being considered"); Comment of NRG, FERC Docket AD09-8 (Nov. 23, 2009), at 12 (stating that the NYISO transmission planning process "contains unwarranted preferences for utility-built transmission," and that the "default solution" is the transmission project proposed by transmission owners); Comments of ITC Holdings Corp, FERC Docket AD09-8 (Nov. 23, 2009), at 6 (claiming that in MISO "transmission planning is still 'bottom up,'" meaning that "individual transmission owner plans are submitted for review . . . and are checked for conflicts, but no effort is made to look at the needs from a larger perspective, for example to determine the most efficient infrastructure to serve the region's long-term needs").

272. Prepared Direct Testimony of David Boguslawski and Carol Sedewitz, Addendum to ISO-NE Compliance Filing, Docket No. ER13-193, (Oct. 25, 2012), at 4–5. Mr. Boguslawski was Vice President of Transmission Strategy and Operations for Northeast Utilities. Ms. Sedewitz was Director, Electric Transmission Planning for National Grid.

273. *Id.* at 8, 11.

274. *Id.* at 11.

275. *Id.* at 12.

276. *Id.* at 24–25.

277. Order No. 1000, *supra* note 189, at PP 59, 78, 147.

278. *Id.* at PP 80, 147.

feasibility of each IOU's local expansion plan was insufficient to satisfy its regional planning mandate.[279] Instead, it required IOUs to engage in a separate planning process managed by a regional planning entity. The regional planning mandate forces each IOU to participate in a regulated planning process that is not focused on its own state-granted territory.

Second, FERC required that regional planning procedures specify criteria for evaluating proposed projects that are neutral as to the project developer or sponsor. Proposal submission requirements and project selection processes must treat IOUs and non-IOUs comparably.[280] Third, FERC required that both local and regional planning processes allow stakeholders to identify the transmission needs driven by public policies.[281] This requirement aimed to remedy opportunities for undue discrimination by preventing providers from planning only for their own needs.

Fourth, FERC applied the Order No. 890 principles to regional planning.[282] FERC concluded that its planning principles ensure that non-IOUs have access to relevant information and opportunities to input information into the planning process, both of which allow them to meaningfully contribute to transmission plan development.[283] Information transparency, FERC determined, is critical to assessing potential impacts proposed projects have on the regional network and enabling the planning process to select the most cost-effective projects.[284]

Fifth, FERC required transmission providers to remove rights-of-first-refusal (ROFR) from OATTs for projects included in a regional plan.[285] ROFRs had provided IOUs with exclusive opportunities to develop projects within their state-granted territories, including segments of projects that spanned multiple IOU service territories. With that protection in place, non-IOU developers were unlikely to propose projects during the planning process due to substantial risk that an IOU would exercise its ROFR and develop the proposed project and capture the associated profits protected by cost-of-service FERC-approved rates.[286] FERC therefore determined that ROFRs create opportunities for undue discrimination against non-IOU developers and found that ordering their removal is consistent with its duty to counteract IOU transmission dominance.[287] FERC allowed IOUs to retain ROFRs for transmission projects located within their state-granted territories and paid entirely by the IOUs' customers.[288] Only projects whose costs are allocated among regional transmission owners (pursuant to cost allocation rules outlined in Order No. 1000) must be open to non-IOUs.

With these reforms, FERC unlocked cost-of-service transmission development to non-IOUs. While Order No. 890 attempted to open planning processes, it

279. *Id*.
280. *Id.* at PP 316–17, 323–29, 335–36.
281. *Id.* at P 205.
282. Order No. 1000, *supra* note 189, at P 18.
283. *Id.* at PP 149–50.
284. *Id.* at P 152.
285. *Id.* at P 253.
286. *Id.* at PP 256–57, 284–86, 320.
287. Order No. 1000, *supra* note 189, at P 286; *see also* Order No. 1000-A, *supra* note 211, at PP 361–63.
288. Order No. 1000, *supra* note 189, at PP 262, 318, 335; Order No. 1000-A, *supra* note 211, at P 425.

left IOUs in control and with the exclusive opportunity to build projects financed by government-authorized cost-of-service rates. Non-IOU developers could earn only market-based revenues,[289] and were shut out of development opportunities identified by IOUs or RTOs in regulated planning processes. FERC's order promised to restructure the transmission segment of the industry by — for the first time — requiring IOUs to compete for the opportunity to earn cost-of-service rates associated with new transmission projects.

Without ROFRs that effectively assigned project development to IOUs, regional planners needed to establish mechanisms to select developers. FERC provided little guidance, requiring only that the regional process "make it possible for nonincumbent transmission developers to compete in the proposal of more efficient or cost-effective transmission solutions."[290] RTOs and other regional planning organizations have adopted two approaches.[291] Under the sponsorship model, IOUs and non-IOU developers propose (or "sponsor") projects that aim to address a regional need identified by the regional planning entity. Sponsors may offer very different solutions to the transmission needs identified by the regional planner, including projects that utilize non-traditional technologies, such as batteries.[292] The regional planning entity then chooses projects that it finds cost-effectively address regional needs and tasks the project sponsor with developing the project. Under the solicitation model, the regional planning entity identifies specific projects rather than merely opening that task up to market participants, and then runs competitive processes to select a developer for each project.

Both models harness competitive forces but to different ends. The sponsorship model is a bottom-up approach that uses an open process to induce developers to offer innovative project proposals.[293] The solicitation model is a top-down process that seeks to reduce costs of projects initially developed by a central planner. Under the latter model, the regional planning entity determines the set of projects

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289. *But see Primary Power*, 131 F.E.R.C. ¶ 61,015 (2010), *order on reh'g,* 140 F.E.R.C. ¶ 61,052 (2012). Shortly before it issued Order No. 1000, FERC determined that a non-IOU developer was eligible under the PJM governing documents to be selected in the regional planning process to develop an economic expansion project and receive cost-of-service rates under the tariff. PJM IOUs unsuccessfully argued that they had exclusive rights to develop all regional projects.

290. Order No. 1000-A, *supra* note 211, at P 87.

291. Review of Recent Regional Plans, *supra* note 197, at 16–17; *see also* Order No. 1000, *supra* note 189, at PP 320–21 (mentioning "bottom up" and "top down" transmission planning).

292. Review of Recent Regional Plans, *supra* note 197, at 16–17, 23–31; *see also*, *e.g.*, ISO NEW ENGLAND, INC., BOSTON 2028 REQUEST FOR PROPOSAL (RFP) – REVIEW OF PHASE ONE PROPOSALS (2020), https://www.iso-ne.com/static-assets/documents/2020/07/final_boston_2028_rfp_review_of_phase_one_proposals.pdf (summarizing 36 project proposals from eight developers in response to ISO-NE's first open solicitation, with estimated costs ranging from $49 million to $745 million).

293. *Id*. at 10; *see also*, *e.g.*, PJM, 2020 REGIONAL TRANSMISSION EXPANSION PLAN (RTEP), at 45 (2020), https://www.pjm.com/-/media/library/reports-notices/2020-rtep/2020-rtep-book-1.ashx [hereinafter RTEP]:

> PJM seeks transmission proposals during each RTEP window to address one or more identified needs – reliability, market efficiency, operational performance and public policy. RTEP windows provide an opportunity for both incumbent and non-incumbent transmission developers to submit project proposals to PJM for consideration. When a window closes, PJM proceeds with analytical, company, constructability and financial evaluations to assess proposals for possible recommendation to the PJM Board.

that will meet the region's needs. Following that, the planning entity aims to lower costs of each project by selecting developers through competitive processes.

Under both models, the competitive regional process merely fills in the gaps of non-competitive IOU-specific local planning processes.[294] IOUs have no obligation to assure that the totality of their local plans is cost-effective from a regional perspective. The regional process required by Order No. 1000 does not supersede each IOU's local planning. In non-RTO regions, the aggregation of local plans forms the basis against which potential regional projects are judged.[295] RTOs take different approaches, but in general IOUs' local plans "serve as a starting point" for RTO regional planning.[296] This IOU-first approach prioritizes IOUs' interests in building infrastructure within their state-granted service territories.

This bifurcated structure of transmission planning follows from Order No. 1000. The evaluation and selection process principles outlined in Order No. 1000 apply only to projects that the planner determines have regional benefits and are therefore paid for through regional cost allocation.[297] Order No. 1000 does not apply to facilities located within an IOU's state-granted service territory that are paid for by that utility's ratepayers.[298] Local development remains at the IOU's discretion, constrained only by the procedural requirements of Order No. 890. Regional planning is thus the exception, not the rule. Transmission development continues to be driven by IOUs in IOU-specific planning processes.[299]

Order No. 1000 says little about merchant transmission projects.[300] To be clear, merchant projects are distinct from non-IOU projects planned through an

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294. *Id*. at 23–28 (summarizing relationship between the regional planning process conducted by each regional planning entity and member utilities' local transmission planning); *see also,* RTEP, *supra* note 293, at 57 (noting that supplemental projects developed by member utilities "are not required for compliance with system reliability, operational performance or market efficiency economic criteria, as determined by PJM" but "are included in PJM's RTEP models").

295. *See, e.g.*, *Pub. Serv. Co. of Colo.*, 48 F.E.R.C. ¶ 61,213, at P 124 (2014):

> [O]nce the local transmission plans are rolled up and are reviewed to identify regional needs, Order No. 1000 requires public utility transmission providers in the transmission planning region to undertake [] the additional step of conducting an analysis to determine whether there are more efficient or cost-effective transmission solutions to meet the regional transmission needs of the region.

See also, Joseph H. Eto & Giulia Gallo, *Regional Transmission Planning: A Review of Practices Following FERC Order Nos. 890 and 1000*, BERKLEY LAB ELEC. MKT. & POLICY vii (Nov. 2017), https://eta-publications.lbl.gov/sites/default/files/lbnl_2001079_final_102519.pdf ("In most non-ISO/RTO regions, the participating utilities' individual transmission plans are combined to form a baseline regional transmission plan. The baseline regional transmission plan is then used to evaluate proposals from stakeholders and prospective transmission developers for both regional transmission needs and regional transmission solutions."); *Id.* at 8:

> the regional transmission planning process . . . primarily [] provide[s] an open, transparent means by which stakeholders are allowed to participate in regional transmission planning . . . can have their proposed solutions vetted against those of the incumbents whose projects are already contained in the baseline regional transmission plan.

296. Review of Recent Regional Plans, *supra* note 197, at 23–28; Eto & Gallo, *supra* note 295, at 13–16; Comments of NYISO, Docket No. RM10-23, (Sep. 28, 2010), at 6 (noting that NYISO planning starts with transmission owners' local plans).

297. Order No. 1000, *supra* note 189, at P 165.

298. *Id*. at PP 262, 318-19.

299. Review of Recent Regional Plans, *supra* note 197, at 23–28; Eto & Gallo, *supra* note 295, at 13-16.

300. Order No. 1000, *supra* note 189, at PP 163–65.

Order No. 1000-compliant process. Merchant projects are "unplanned" from FERC's perspective and can only earn market-based revenue. Order No. 1000 projects, whether developed by an IOU or another entity, are planned through a FERC-approved process and receive cost-of-service rates pursuant to cost allocation rules that meet the Order No. 1000 standards.

Despite the limited reach of Order No. 1000, IOUs and RTOs have attempted, and often succeeded, at scaling back competitive development even further. In the next section, I discuss these efforts to reduce the impacts of Order No. 1000 on IOU transmission dominance.

D. The FERC-Regulated Planning Process is a Protection Racket

IOUs responded to Order No. 1000 by filing suit in federal court (along with numerous TDUs[301]), arguing that the FPA does not provide FERC with authority to require public utilities to jointly plan regional transmission.[302] As their unsuccessful litigation was playing out, IOUs, often supported by RTOs, made two key moves to limit transmission competition. First, they argued in Order No. 1000 compliance proceedings that FERC has no authority to remove ROFRs from RTO tariffs. Second, they proposed numerous project categories where ROFRs would remain in effect even if they lost the first argument.[303] On the first issue, IOUs lost in every proceeding at FERC and four times in federal appeals courts. On the second issue, FERC has allowed several exemptions, undercutting its ambitions to open planned transmission development to competition.

I will not recount the range of arguments IOUs offered in FERC proceedings and federal court appeals in opposition to FERC's ROFR rollback, but I think it is worth dwelling on IOUs' claims about the source of authority for their ROFRs. Their claims explain in part why IOUs formed ISOs and RTOs and elucidate the relationship between RTOs and their IOU members. Recall that following Order No. 888, IOUs in tight power pools resisted FERC's directive that they relinquish decisionmaking authority to new independent entities.[304] Perhaps recognizing that the days of absolute IOU control were waning under a more assertive FERC, the

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301. While IOUs were likely seeking to protect their transmission dominance, municipal utilities that opposed Order No. 1000 were more likely to be concerned about increasing transmission costs due to new regional cost allocation methodologies. TDUs have been skeptical of FERC's regionalization efforts and have protested the administrative costs of RTOs and development of RTO capacity markets.

302. *See* D.C. Circuit Docket No. 12-1232. The following IOUs or utility holding companies signed a brief arguing FERC does not have authority to mandate regional transmission planning: FirstEnergy, Oklahoma Gas & Electric, PSE&G, Southern Company, and all MISO transmission owners, which then included Ameren, Duke Energy, Montana-Dakota Utilities Co., NiSource, Otter Tail Power Co., Vectren, and Xcel. These additional utilities hid behind a front group called "Coalition for Fair Transmission Policy" that also signed the brief: CMS, ConEd, DTE, Progress Energy, and SCANA. Several public power entities, a cooperative entity, MISO, and three PUCs signed the brief as well.

303. *Id.* at P 329 (committing to evaluate exemptions from competition when relevant "to ensur[ing] the incumbent transmission provider can meet its reliability needs or service obligations").

304. *Supra* notes 127–133 and accompanying text (describing rejected ISO proposals that were inconsistent with FERC's independence principle); *see also* Allegheny Power, Order No. 2000 RTO Compliance Filing and Petition for Declaratory Order, FERC Docket No. RT01-10, Oct. 16, 2000 ("Allegheny . . . disfavors allowing its significant dollar investment in transmission facilities to be controlled and operated by a nonprofit ISO." Allegheny explained that it was "affected by the problem of pancake elimination.")

former power pool member IOUs coalesced around a governance approach that allowed them to retain influence through RTO committees.[305] These early-mover IOUs likely had various motivations for ceding control. For some IOUs, joining an RTO was a condition imposed by FERC for approving a merger application.[306] Others were bullish about the new organized wholesale markets and believed that joining an RTO would enable them to profit from new opportunities to sell power.[307] Filings in Order No. 1000 proceedings reveal another factor.

IOUs in all four multi-state RTOs as well as three of the RTOs themselves[308] told FERC that ROFRs were part of the "quid pro quo for making [] RTO formation a reality."[309] PJM IOUs further explained that their "exclusive right[s] to build planned cost-of-service transmission in their zones . . . pre-existed PJM," and agreements between PJM and its member IOUs preserved those rights.[310] RTOs, according to this version of events, were designed to retain the protections formerly provided by IOU power pool agreements. When FERC's Open-Access mandate diminished IOUs' generation dominance, IOUs sought assurances that RTOs would protect their local transmission monopolies.

PSE&G, a PJM-member IOU, put a finer point on it, arguing that "the core business of the [ ] transmission owners is to build, own and maintain transmission facilities, [and] an RTO arrangement that would divest that owner of a substantial portion of its core business is simply incompatible with its business model."[311] Put differently, PSE&G argued that non-competitive transmission development is its

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305. *Supra* notes 139–141 and accompanying text (describing two-tier governance structures).

306. *See, e.g., Am. Elec. Power Co. et al.*, 90 F.E.R.C. ¶ 61,242, at p. 61,787.

307. *See, e.g.*, PSE&G, PSEG SUMMARY: ANNUAL REPORT 1998 7 (1998), https://www.nrc.gov/docs/ML1810/ML18107A187.pdf (telling investors that industry restructuring was "creating a burgeoning wholesale trading market" and that its generation fleet was "well-situated to take advantage of opportunities" in PJM and NYISO); Am. Elec. Power, AEP Annual Summary Report: 2000 4 (2000), https://www.annualreports.com/HostedData/AnnualReportArchive/a/NYSE_AEP_2000.pdf (proclaiming that its "portfolio of businesses and assets positions [it] uniquely for success in the high-growth wholesale segment").

308. PJM did not opine on whether it was legal or appropriate for FERC to order removal of ROFRs. ISO-NE, MISO, and SPP all sided with their IOU members.

309. *PJM Interconnection,* 147 F.E.R.C. ¶ 61,128, at P 102, n.187 (2014); *ISO New England*, 150 F.E.R.C. ¶ 61,209, at P 171 (2015) (arguing that ROFRs were part of a "trade-off" wherein utilities gave up operational control of their facilities and joined an RTO); Request for Rehearing of Oklahoma Gas & Electric, Docket No. ER13-366, Aug. 19, 2013, at 13 (stating that ROFRs were part of a "natural quid pro quo for agreeing to become subject to a regional planning and expansion process"); Order No. 1000-A, *supra* note 211, at P 355 (noting MISO's argument that its ROFR is a "fundamental element of [its] structure as an RTO"); Request for Rehearing of the MISO Transmission Owners, Docket No. ER13-187, Apr. 22, 2013, at 26 (arguing that the ROFR was part of a bargained-for exchange pursuant to which IOUs ceded control of their transmission to MISO).

310. *Primary Power*, 140 F.E.R.C. ¶ 61,052, at P 58 (2012) (quoting filing by PJM IOUs). The IOUs provide no authority for this supposed right to build all transmission. Request for Rehearing of PJM Transmission Owners Group, FERC Docket No. ER10-253, May 13, 2010. *See also* Request for Rehearing of PSEG Companies, FERC Docket No. EL10-52, May 13, 2010 (claiming that PJM Transmission Owners have the "contractual and FERC-approved exclusive right . . . to build non-merchant transmission upgrades with their service territories"); Brief of the PSEG Companies, The PPL PJM Companies, and Exelon Corporation, *Public Serv. Elec. and Gas Co. v. FERC,* Docket No. 12-1382 (D.C. Cir. Apr. 10, 2013) (repeating same argument).

311. Request for Rehearing and Clarification of PSE&G, Docket No. ER10-253 (May 13, 2010); *see also* Testimony of Maureen Borkowski, Vice President Ameren Services on Behalf of MISO Transmission Owners, Docket No. AD09-8 (Sept. 21, 2009), at 3 ("By joining the Midwest ISO, the Transmission Owners did not agree to forego their rights to invest in and earn a return on new assets in their own systems.").

"core business" and any intrusions by competitor developers is equivalent to deprivation of its property and inconsistent with the RTO's protective purpose.[312] The company did not point to any state law to support its argument but instead claimed that it has a constitutionally protected right under the Fifth Amendment to a monopoly in the development of interstate transmission lines within its state-granted service territory.[313] Other PJM IOUs made similar constitutional claims.[314] Neither FERC nor any federal court endorsed these novel theories.

Order No. 1000 voided this supposed bargain between RTOs and their IOU members as a matter of law. IOUs had argued that FERC could not order RTOs to remove ROFRs because the relevant tariff provisions were protected by the so-called *Mobile-Sierra* presumption, which limits FERC's authority to abrogate contract terms.[315] FERC responded that the *Mobile-Sierra* presumption that freely negotiated contracts between sophisticated parties are just and reasonable is rooted in an assumption that contract negotiations are between adversarial parties pursuing independent interests. FERC concluded that IOUs forming RTOs shared the common aim of "protecting themselves from competition in transmission development."[316] Under those circumstances, where the parties to the RTO agreement were not adversarial with respect to ROFR provisions, FERC cannot presume that the outcome is just and reasonable.[317] Four federal appeals court affirmed FERC's orders removing multi-state RTO ROFRs, with two specifically endorsing FERC's conclusion that *Mobile-Sierra* deference does not apply to agreements among parties with common interests that seek to exclude competition.[318]

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312. PSE&G similarly argued that "allowing PJM to designate other entities to build non-merchant transmission facilities in the zone of an existing transmission owner constitutes an unconstitutional regulatory taking of the PJM TO's contractual rights under the various PJM agreements without just compensation in violation of the U.S. Constitution." Request for Rehearing and Clarification of PSE&G, Docket No. ER10-253 (May 13, 2010), at 19. When TOs had an opportunity to litigate this claim in federal court in proceedings about Order No. 1000, they declined to raise this argument.

313. *Id.*

314. Request for Rehearing of PJM Transmission Owners Group, FERC Docket No. ER10-253 (May 13, 2010), at 37 ("any abrogation or impairment of the transmission owners' contractual rights to build under the [PJM agreement] is in contravention of the Due Process and Takings Clauses of the U.S. Constitution").

315. *See, e.g., Midwest Indep. Sys. Operator, et al.*, 142 ¶ F.E.R.C. 61,215, at P 175 (2013).

316. *PJM Interconnection, et al.,* 142 F.E.R.C. ¶ 61,214, at P 189 (2013); *Midwest Indep. Sys. Operator, et al.*, 142 ¶ F.E.R.C. 61,215, at P 183 (2013); *ISO-New England*, 143 F.E.R.C. ¶ 61,150, at P 169 (2013); *Southwest Power Pool, et al.*, 144 F.E.R.C. ¶ 61,059, at P 133 (2013).

317. *See, e.g., PJM Interconnection,* 147 F.E.R.C. ¶ 61,128, at P 106–111 (2014).

318. Oklahoma Gas and Electric Co. v. FERC, 827 F.3d 75, 80 (D.C. Cir. 2016) ("Just as unfair dealing, fraud, or duress will remove a provision from the ambit of *Mobile–Sierra*, so also will terms arrived at by horizontal competitors with a common interest to exclude any future competition."); MISO Transmission Owners, et al. v. FERC, 819 F.3d 329, 335 (7th Cir. 2016) (finding that because the parties to the MISO agreement were "seeking to protect themselves from competition from third parties," the Mobile-Sierra presumption does not apply); *see also* American Transmission Systems Inc., v. FERC, 2016 WL 3615443 (D.C. Cir. 2016, unpublished) (dismissed for lack of jurisdiction); Emera Maine v. FERC, 854 F.3d 662 (D.C. Cir. 2017).

While IOUs and RTOs lost the legal argument, they have largely upheld the spirit of their arrangements. Over the past several years, the vast majority of transmission projects have been developed outside of competitive processes.[319] RTOs that preach competition in power generation have been less sanguine about the value of competition in transmission development. They have supported the shift away from regional projects, which must be developed competitively, to smaller or supposedly time-sensitive projects that IOUs build with little oversight and without competitive pressures.

A "common interest" agreement between PJM and its transmission-owning members illustrates RTO support of the IOUs' anti-competitive agenda.[320] The agreement facilitates closed-door meetings between PJM and IOUs and envisions PJM conferring with IOUs on section 205 filings and providing technical assistance.[321] The crux of the agreement allows the parties to confidentially share information, without limitations and no transparency for non-parties. PJM and its IOUs entered into the agreement a few months after FERC issued Order No. 1000. While I am not aware of whether other RTOs have similar agreements with their IOU members, it is common for RTOs to collaborate with transmission owners on writing transmission rules that disadvantage IOUs' competitors. This sort of exclusive collaboration, particularly where it is facilitated by confidential arrangements, is difficult to square with FERC's broad commitment to comparability and transparency in its major reform orders.

This specific PJM-IOU agreement, and more generally the common practice of RTO-IOU joint FERC filings and legal advocacy, suggest that FERC's "independence" principle fails to remedy IOU transmission dominance. Because FERC has not mandated RTO membership, IOUs may attempt to withdraw their assets from RTO control at any point. The process for doing so would be complex, time-

319. Johannes P. Pfeifenberger, et. al, *Cost Savings Offered by Competition in Electric Transmission*, BRATTLE GRP., at 5 (Apr. 2019), https://brattlefiles.blob.core.windows.net/files/16726_cost_savings_offered_by_competition_in_electric_transmission.pdf (The report commissioned by LS Power, a non-IOU transmission developer, found that from 2013 to 2017 only 3% of transmission investment ($540 million out of $20 billion per year) was committed through processes open to non-IOU developers.) [hereinafter Brattle Report]; *See also* Competitive Transmission Development Technical Conference, Docket No. AD16-18-000, Comments of Transmission Access Policy Study Group at 36 (Oct. 3, 2016); *infra* notes 360–362.

320. On February 24, 2021, PJM's Transmission Owners Agreement Administrative Committee posted two versions of the "Confidentiality and Common Interest Agreement," one dated September 13, 2011, and the other dated January 24, 2017. In a dispute about transmission cost allocation, various parties have made representations to FERC about the agreement in FERC Docket No. EL21-39. LSP Transmission Holdings II, Comment in Support (Feb. 9, 2021); PJM Interconnection, Motion for Leave to File Answer and Answer (Feb. 25, 2021); Indicated Transmission Owners, Answer (Mar. 4, 2021); Silver Run Electric, Response to Request for Abeyance (Mar 5. 2021); Indicated Transmission Owners, Motion for Leave to File Answer and Answer (Mar. 22, 2021).

321. *See, e.g.*, 2011 Agreement at pg. 1: "it is in the common interest of the PJM TOs with the assistance of PJM to develop mutually agreeable filings to be submitted to the FERC . . ."; *id.* at pg. 2: "in order effectively to pursue the Participants' common interests with respect to the Section 205 Filings, the Parties have also each concluded that, from time to time, such interests will be best served by sharing Confidential Information . . ."; 2017 Agreement at pg. 1: "the Section 205 Working Group may request the assistance of PJM in the Section 205 Working Group Matters . . ."

consuming, and costly, and withdrawal would be subject to FERC approval,[322] but IOUs clearly retain the right under the FPA to initiate that process. This option gives each IOU individually, and an RTO's IOU members collectively, leverage over the RTO's management.[323] If an IOU concludes that its RTO is "divest[ing it] of a substantial portion of its core business" by, for example, opening transmission development to competition, that IOU may attempt to withdraw. Losing control of that IOU's transmission assets might complicate the RTO's operations, could lead to a cascade of IOU exits, and would diminish the scope of the RTO's authority. In addition, as the description of the ISO-NE planning process illustrates, RTOs have depended on IOUs for information and analysis. FERC's independence principle does not address this sort of undue influence that may coerce RTOs into advancing the financial and strategic interests of their transmission-owning members.

With their ROFRs in jeopardy beginning in 2010 with FERC's release of the Order No. 1000 proposal, and ultimately eliminated by 2017 following litigation, IOUs and RTOs shielded projects from competitive processes by changing RTO tariffs or interpreting them in a manner that favored IOU interests. FERC has generally supported IOU efforts to evade competitive processes, although, as I describe, FERC did open investigations into various exemptions from competition and rejected some IOU efforts to create additional non-competitive project categories. Below I highlight examples of how RTO rules stifle FERC's efforts to promote competition.

I start in PJM, where IOUs have tripled spending on local non-competitive projects since Order No. 1000 went into effect while the value of PJM-approved regional projects has dropped by a third.[324] To untangle the web of project categories in PJM and illustrate how PJM's tariff reinforces IOU transmission dominance, I begin with PJM's response to Order No. 890. Because PJM's IOU members transferred operational control of their transmission assets to PJM, they did not maintain their own OATTs and therefore relied on provisions in PJM's tariff to demonstrate that their local planning processes complied with Order No. 890.[325]

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322. *See* Ari Peskoe, *ISO-NExit: Exploring Pathways for a Utility's Withdrawal from New England's Regional Transmission Organization* (Mar. 2020), http://eelp.law.harvard.edu/wp-content/uploads/ISONexit-Memo.pdf.

323. *See PJM Interconnection, et al.,* 92 F.E.R.C. ¶ 61,282, at p. 61,958 (2000) ("PJM argues that the right to withdraw without notice could undermine ISO independence since there would be a constant overhanging threat that a TO may withdraw if it disagrees with ISO action.").

324. PJM Transmission Expansion Advisory Committee, *Project Statistics* (May 12, 2020), https://www.pjm.com/-/media/committees-groups/committees/teac/2020/20200512/20200512-item-10-2019-project-statistics.ashx. PJM's data shows that annual spending on Supplemental Projects increased from $1.25 billion per year from 2005 to 2013 to $3.73 billion per year from 2014 to 2019. PJM-approved regional projects dwindled from $2.76 billion to $1.86 billion per year. Spending on Supplemental Projects constituted 30% of all transmission spending until 2013, but increased to 65% of all transmission spending from 2014 to 2019. Note that PJM's document labels local IOU spending as Supplemental Projects dating back until 2005 even though that label was not adopted until 2008. FERC conditionally accepted PJM's Order No. 1000 compliance filing on March 22, 2013. *PJM Interconnection, et al.*, 142 F.E.R.C. ¶ 61,214 (2013).

325. *PJM Interconnection,* 123 F.E.R.C. ¶ 61,163, at P 122 (2008); *Monongahela Power Co., et al.*, 156 F.E.R.C. ¶ 61,134, at P 12 (2016) (PJM Transmission owners "opt[ed] to comply with Order No. 890 by participating in the transmission planning process that is outlined the PJM Operating Agreement").

In its compliance filing, PJM distinguished between 1) regional projects that would be subject to approval by PJM's Board and regional cost allocation and 2) local projects that are not needed to meet any PJM reliability, performance, or economic efficiency standard, would not be evaluated by PJM's Board, and whose costs would be borne solely by the local IOU (and collected from its captive ratepayers).[326] For the former category, PJM's then-existing regional planning process (RTEP) formed the basis for its Order No. 890 compliance.[327]

For the latter project category, FERC created new committees (Subregional RTEPs) that would provide forums for stakeholders to review and comment on "Transmission-Owner initiated"[328] "local reinforcement"[329] projects included in local transmission plans.[330] PJM pledged to FERC that it would "evaluate" IOU local planning standards and criteria to "determine if these local reinforcements (called Supplemental Projects) are needed to optimally meet the local transmission owner planning criteria."[331] Through this process, PJM assured FERC that local planning processes of its member IOUs would comply with Order No. 890.[332]

Despite these assurances from PJM, FERC opened an investigation in 2015 into the relationship between Local Plans and the RTEP.[333] After a technical conference, FERC expressed "concern" that "the transmission planning process for Supplemental Projects . . . does not comply with Order No. 890" and ordered PJM IOUs to propose revisions to the PJM tariff or show why they should not be required to do so.[334] Following a comment period, FERC found that PJM IOUs' local planning processes failed to provide stakeholders with meaningful opportunities to participate and therefore violated Order No. 890.[335]

IOUs defended their secretive planning processes by claiming that stakeholder input and information transparency are pointless when the "most obvious

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326. *PJM Interconnection,* 123 F.E.R.C. ¶ 61,163, at P 113 (2008).

327. *Id*. at PP 74–76, 140–142.

328. PJM Compliance Filing, Docket No. OA-08-32, at 35 (Dec. 7, 2007).

329. *Id.* at 7.

330. *PJM Interconnection*, 130 F.E.R.C. ¶ 61,167, at P 12 (2010).

331. PJM Compliance Filing, Docket No. OA-08-32, at 35–36 (Dec. 7, 2007); *PJM Interconnection,* 123 F.E.R.C. ¶ 61,163, at P 141 (2008) ("local plans are submitted to PJM for review, concurrence, coordination, and integration in the RTEP"); *PJM Interconnection*, 142 F.E.R.C. ¶ 61,214, at P 59 (2013) ("PJM adds that locally proposed Supplemental Projects are factored into the RTEP process, and if they are found to most efficiently resolve transmission needs, these local projects are included in the regional plan as RTEP projects for the purposes of cost allocation."); *Id.* at P 121; *PJM Interconnection, et al.*, 151 F.E.R.C. ¶ 61,172, at P 22 (2015); *Monongahela Power Co., et al.*, 156 F.E.R.C. ¶ 61,134, at PP 5, 60 (2016).

332. It is noteworthy that PJM detailed this process to FERC only in response to FERC twice ordering PJM to clarify the connection between Local Plans and the RTEP and to specify that local planning will be consistent with Order No. 890 principles. PJM's initial filings were vague on these details. *PJM Interconnection*, 123 F.E.R.C. ¶ 61,163 PP 140–141 (2008); *PJM Interconnection*, 127 F.E.R.C. 61,166 at PP 28–29 (2009).

333. *PJM Interconnection*, 152 F.E.R.C. ¶ 61,197 at P 5 (2015) (noting FERC staff sent a deficiency letter to PJM asking for information about Supplemental Projects and Local Plans); *Id.* at P 15 (establishing technical conference); Notice of Technical Conference, Docket No. ER15-1344 (Oct. 8, 2015) ("The technical conference will explore issues related to PJM's application of its Order No. 1000-compliant transmission planning process to local transmission facilities . . .").

334. *Monongahela Power Co., et al.*, 156 F.E.R.C. ¶ 61,134, at P 12 (2016).

335. *Monongahela Power Co., et al.*, 162 F.E.R.C. ¶ 61,129, at PP 74–77, 82 (2018).

solution" is for the IOU to replace an aging facility that it owns.[336] FERC rejected that argument, noting that merely replacing decades-old transmission lines with an identical facility fails to consider changes to the grid's topology and technological developments since the original facility was put into service.[337] Non-IOU PJM members told FERC that IOUs plan Supplemental Projects in "a vacuum, divorced from the broader RTEP planning process," and urged FERC to require full integration of the regional and local planning processes.[338] Hoping to "mitigate concerns that Supplemental Projects may be structured to avoid or replace regional transmission projects that would otherwise be subject to competitive transmission development under Order No. 1000,"[339] FERC ordered additional transparency. However, it denied the broader reforms requested by non-IOUs, including their request that IOUs be required to actually respond to stakeholder comments on local plans.[340]

While it remains to be seen whether the new local planning procedures lead to different outcomes, the proceeding did result in a clear win for the IOUs. FERC approved their proposal to transfer the provisions about local planning processes from the PJM Operating Agreement to the PJM OATT.[341] Recall that IOUs won a key legal victory following the conversion of PJM from a power pool to an ISO that validated IOUs' section 205 filing rights over transmission rate design.[342] Following that decision, FERC approved a settlement between PJM IOUs and PJM that provided IOUs with "exclusive and unilateral" rights to make section 205 filings about various matters in the OATT and left PJM with exclusive filing rights over the Operating Agreement.[343] By approving the move from the Operating Agreement to the OATT, FERC provided IOUs with unilateral authority to file amendments under section 205 to local planning processes.

PJM IOUs wasted little time in wielding their expanded filing authority to formalize additional carve-outs from competition. Addressing so-called "End-of-Life" (EOL) transmission projects, IOUs stated in a June 2020 filing that although "projects required to maintain, repair, or replace transmission facilities" are not subject to Order No. 890, they nevertheless proposed to voluntarily disclose information about these projects pursuant to the Supplemental Projects process outlined in the IOU-controlled tariff.[344] A stakeholder-endorsed counter proposal[345] would have added EOL planning to the PJM-controlled regional planning process in an attempt to ensure that the regional network is "developed with an eye toward the future, rather than simply rebuilding the grid of the past"[346] for the IOUs' financial

336. *Id.* at P 79.

337. *Id.* FERC also rejected IOUs' initial filing, finding that the processes their proposed tariff amendments would implement would violate Order No. 890. *Id*. at PP 100–104.

338. *Monongahela Power Co., et al.*, 164 F.E.R.C. ¶ 61,217, at P 23 (2018).

339. *Monongahela Power Co., et al.*, 162 F.E.R.C. ¶ 61,129, at P 108 (2018).

340. *Monongahela Power Co., et al.*, 164 F.E.R.C. ¶ 61,217, at PP 21–28.

341. *Monongahela Power Co., et al.*, 162 F.E.R.C. ¶ 61,129, at P 97.

342. *Supra* notes 134–138 and accompanying text.

343. *PJM Interconnection*, et al., 105 F.E.R.C. ¶ 61,294, at P 11 (2003).

344. PJM Transmission Owners' Transmittal Letter, Docket No. ER20-2046 (June 12, 2020).

345. PJM Transmittal Letter, Docket No. ER20-2308 (July 2, 2020).

346. Letter from PJM Stakeholders to PJM Chairman and PJM CEO (May 12, 2020) (on file with author).

and strategic gain. Their proposal would obligate IOUs to notify PJM six years in advance of a facility's end-of-life date, a requirement that PJM argues is intended to inform the regional planning process. This advanced notification also appears designed to reduce the number of projects developed through reliability-related exemptions from competition.

FERC accepted the IOUs' filing as just and reasonable, finding that their proposed tariff revisions would "provide[] greater transparency."[347] In a separate order, FERC rejected the stakeholder proposal.[348] In the orders, FERC applied its prior determination that projects "result[ing] in only incidental expansions of the transmission system" are not subject to the Order No. 890 planning principles.[349] FERC also decided that the IOUs did not transfer planning of so-called asset management projects to PJM in the foundational agreements between the parties.[350] Taken together, these conclusions provide PJM IOUs with unfettered discretion to rebuild the existing transmission network, free from planning oversight. IOUs in other RTOs likely have the same autonomy and would not even have to adopt the disclosure rules approved by FERC in these proceedings.

PJM and its IOU members have also added numerous exemptions to competition. In their Order No. 1000 compliance filing, they proposed to exempt from competition any project that PJM deemed necessary within three years for reliability reasons.[351] FERC agreed with the premise that competition might be infeasible for such time-sensitive projects but required PJM to disclose in each instance why it was invoking this exemption and provide stakeholders with opportunities to comment.[352] In 2020, FERC found that PJM's implementation of this exemption was not transparent and ordered PJM to follow the procedures in its tariff.[353] Stakeholders urged FERC to go further, arguing that IOUs conjured up these so-called "immediate needs" projects by failing to report system information to PJM in a timely fashion.[354] FERC declined to add new reporting requirements.[355]

PJM and its IOUs have also used cost allocation to shield projects from competition. Because FERC eliminated ROFRs only for projects whose costs are allocated regionally among RTO members,[356] removing a project category from regional cost allocation and allocating all costs to the local IOU leaves the ROFR in place, allowing the local IOU to develop all future projects in that category without any competitive process. In 2015, FERC rejected a PJM proposal (filed on behalf

347. *PJM Interconnection, et al.,* 172 F.E.R.C. ¶ 61,136, at P 88 (2020), *reh'g denied*, 173 F.E.R.C. ¶ 61,225 (2020).

348. *PJM Interconnection,* 173 F.E.R.C. ¶ 61,242 (2020).

349. *PJM Interconnection, et al.,* 172 F.E.R.C. ¶ 61,136, at P 89 (referencing *So. Cal. Edison Co*, 164 F.E.R.C. ¶ 61,160, at P 33 (2018); *Cal. Pub. Util. Comm'n v. Pac. Gas & Elec. Co.*, 164 F.E.R.C. ¶ 61,161, at P 68 (2018)); *PJM Interconnection,* 173 F.E.R.C. ¶ 61,242, at P 56.

350. *PJM Interconnection, et al.,* 172 F.E.R.C. ¶ 61,136, at P 83.

351. *PJM Interconnection*, 142 F.E.R.C. ¶ 61,214, at P 247 (2013).

352. *Id.* at PP 248–255.

353. *PJM Interconnection*, 171 F.E.R.C. ¶ 61,212 (2020).

354. Comments of Old Dominion Electric Cooperative, FERC Docket No. EL19-91, at 8 (Jan. 27, 2020); Comments of American Municipal Power, Inc., FERC Docket No. EL19-91, at 5–6 (Jan. 27, 2020).

355. *PJM Interconnection*, 171 F.E.R.C. ¶ 61,212, at PP 87, 90.

356. Order No. 1000-A, *supra* note 211, at P 430.

of its member IOUs) to remove so-called "Local Reliability Projects" from competitive development by allocating all costs to the host IOU.[357] In 2016, IOUs used their section 205 filing rights to propose allocating to the host IOU all costs of projects driven by certain local planning criteria.[358] The D.C. Circuit vacated FERC's approval and held that allocating costs of projects with regional benefits violates the cost-causation principle, which is a cornerstone of FERC's cost-allocation policies.[359]

IOUs in MISO, which has developed almost no transmission through competitive processes, have also used cost allocation to shift projects out of the competitive regional process.[360] Alongside various Order No. 1000 compliance filings, MISO and its IOUs jointly filed a proposal to remove "Baseline Reliability Projects" (BRP) from the regional cost allocation process and instead assign all costs of a BRP project to the IOU whose service territory hosts the project.[361] Following the change, the number of BRP projects and value of BRP projects ballooned, from an average of forty-seven projects per year valued at $340 million annually (2010–2013) to an average of eighty-five projects per year valued at $777 million annually (2014–2019).[362] Other non-competitive IOU projects similarly increased from $775 million per year (2010–2013) to $1.9 billion per year (2014–2019).[363] Meanwhile, regional projects dwindled from nearly $6 billion (total, 2010–2013) to just $300 million (total, 2014–2019).[364] In 2020, FERC rejected a complaint that argued allocating all BRP costs to a single IOU is inconsistent with the cost causation principle.[365]

In 2019, MISO and its member IOUs again sought to carve-out additional projects from competition by changing cost allocation rules.[366] The filing parties suggested that enhanced cost-benefit analysis under their proposed rules would

357. *PJM Interconnection, et al.*, 151 F.E.R.C. ¶ 61,172 (2015).

358. *PJM Interconnection*, 154 F.E.R.C. ¶ 61,096 (2016). In 2017, FERC approved an exemption filed by PJM for substation upgrades intended to address certain reliability violations. *See also* Letter Order, FERC Docket No. ER17-1619-001 (Oct. 11, 2017). FERC also approved an exemption filed by PJM for projects driven by reliability violations related to lower-voltage facilities. *PJM Interconnection*, 156 F.E.R.C. ¶ 61,132 (2016).

359. Old Dominion Electrical Cooperative v. FERC, 898 F.3d 1254 (D.C. Cir. 2018).

360. *Id*; *see also* Brattle Report, *supra* note 319, at 18 (noting less than 1% of total transmission investment from 2013 to 2017 were subject to competitive processes).

361. *MISO, et al.*, 142 F.E.R.C. ¶ 61,215 (2013), *aff'd*, MISO Transmission Owners, et al. v. FERC, 819 F.3d 329 (7th Cir. 2016).

362. Complaint of Coalition of MISO Transmission Customers, et al., FERC Docket No. EL20-19, at 31–32 (Jan. 21, 2020).

363. *Id.* "Other" projects are economic projects below 345 kV. All costs are allocated to the host IOU, and they are therefore developed without competition. *See* Complaint of LSP Transmission Holdings II, L.L.C., et al., FERC Docket EL19-79 (June 5, 2019) (noting that critics have argued that "there are not clear criteria and procedures for identifying and evaluating projects in this category nor a requirement that they be evaluated at all"). FERC denied the complaint while concurrently approving MISO's proposal to lower the threshold for regionally cost allocated projects from 345 to 230 kV. *LSP Transmission, et al.*, 172 F.E.R.C. ¶ 61,098 (2020).

364. Complaint of Coalition of MISO Transmission Customers, et al., *supra* note 362, at 31–32.

365. *Coalition of MISO Transmission Customers, et al., v. MISO*, 172 F.E.R.C. ¶ 61,099, at P 86 (2020).

366. MISO and MISO Transmission Owners Tariff Filing Transmittal Letter, FERC Docket No. ER19-1124 (Feb. 19, 2019).

lead to "greater opportunities for the identification" of projects that would be subject to competitive solicitations, but the proposal also included a new exemption that appeared to be designed to limit these new opportunities.[367] FERC rejected the reform package due its inclusion of another project category whose costs would not be regionally allocated even though MISO proposed to demonstrate regional benefits of each project within this category.[368] FERC found that this mismatch between regional benefits and local cost allocation was inconsistent with the cost-causation principle.[369] In early 2020, FERC rejected a similar proposal filed jointly by MISO and its member IOUs, again due to the mismatch between expected benefits and allocated costs.[370] FERC subsequently approved the third filing from MISO and its TOs, which did not propose to allocate all costs to the local IOU but did include a competitive exemption that might negate the potential expansion of competition.[371]

In ISO-NE, the RTO finally announced its first competitive solicitation process in December 2019.[372] While more than two-thirds of the region's transmission investment has been approved through the regional process,[373] all but one project were exempt from competition based on ISO-NE's carve-out for time-sensitive projects needed for reliability purposes.[374] In 2020, following its investigation into ISO-NE's use of this exemption, FERC concluded that the record did not support a finding that the relevant ISO-NE tariff provisions are unjust and unreasonable or that ISO-NE is implementing the tariff inconsistent with FERC's directions.[375] FERC brushed aside claims that the "exemption incentivizes transmission

367. *Id.* ("In light of these enhancements, there is a greater likelihood that additional Market Efficiency Projects will be identified and . . . such projects would be subject to the Competitive Developer Selection Process. To address the distinct possibility that engaging in a lengthy developer selection process may push the implementation of such projects past their need-by dates for reliability purposes, the Applicants propose a limited exception from the Competitive Developer Selection Process for Immediate Need Reliability Projects."). Protestors pointed out, however, that MISO did not include guardrails imposed by FERC on other RTOs' "immediate needs" exemptions in an attempt to limit their applicability. Protest of LSP Transmission, et al., FERC Docket No. ER19-1124

368. *MISO, Inc.*, 167 F.E.R.C. ¶ 61,258, at PP 56–64 (2019).

369. *Id*.

370. *MISO*, *Inc.,* 172 F.E.R.C. ¶ 61,100, at P 19 (2020).

371. *MISO, Inc.*, 172 F.E.R.C. ¶ 61,095 (2020).

372. ISO-NE, Boston 2028 RFP – Review of Phase One Proposals (Jul. 17, 2020), https://www.iso-ne.com/static-assets/documents/2020/07/final_boston_2028_rfp_review_of_phase_one_proposals.pdf.

373. Comments of New England State Agencies, FERC Docket No. EL19-90, at 8 (Jan. 24, 2020) ("[A]ll 30 projects were built or are being built by incumbent transmission owners rather than being bid competitively. As a consequence, ISO-NE is the last regional transmission operator to conduct a competitive transmission planning and procurement process."); Comments of the Connecticut Public Utilities Regulatory Authority, FERC Docket No. EL19-90, at 2 (Jan. 24 2020) ("the extensive, exclusive reliance upon the immediate need exemption has avoided introducing competition into the process of solving transmission needs"); Brattle Report, *supra* note 319, at 8, fig.2; Lon L. Peters, *Shareholders v. Ratepayers in New England*, 34 ELEC. J. 106904 (2021) ("Two decades of coordinated planning and investments have, implausibly, left the ISO in a situation where almost all grid investments are time-sensitive.").

374. Response of LSP Transmission Holdings, FERC Docket No. EL19-90, at 5 (Jan. 27, 2020).

375. *ISO New England*, 171 F.E.R.C. ¶ 61,211 at P 55 (2020).

owners to do short-term planning and partake in other behavior to avoid competition," responding that it "disagree[s] that these incentives themselves render the exemption unjust and unreasonable."[376]

FERC launched a similar inquiry into SPP's so-called "immediate-needs" exemption. FERC concluded that there was insufficient evidence to find that SPP's tariff was unjust and unreasonable or unduly discriminatory.[377] Nonetheless, as is the case for the other three multi-state RTOs, SPP has rarely utilized competitive processes. In October 2020, SPP completed its second competitive development process, selecting an IOU-affiliate to construct a $66 million project.[378] SPP had previously cancelled the only project it selected in its first competitive process.[379]

In New York, no project has been developed through the NYISO's planning process that identifies economically beneficial regional projects since FERC approved the process in 2008.[380] The market monitor has highlighted several technical deficiencies with the process that may "systematically undervalue projects," and has also argued that the need for approval by 80% of IOUs "may enable a small group of participants to block economic investments,"[381] a concern that was echoed by the American Antitrust Institute and competing transmission developers.[382] Finally, it is worth noting that CAISO has completed ten competitive solicitation processes as of March 2019.[383] By comparison, MISO, SPP, ISO-NE, and NYISO have completed just five competitive processes combined.[384]

To sum up, FERC has repeatedly undermined its own efforts to introduce competition into cost-of-service, planned transmission development. IOUs continue to exploit their unearned advantages to dominate transmission development.

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376. *Id.* at P 59.

377. *Southwest Power Pool,* 171 F.E.R.C. ¶ 61,213 (2020).

378. Southwest Power Pool, Press Release, *SPP Stakeholders Approve Transmission Plans and Improvements to Grid Operations* (Oct. 28, 2020), https://spp.org/newsroom/press-releases/spp-stakeholders-approve-transmission-plans-and-improvements-to-power-grid-operations/.

379. LS Transmission Holdings, Motion for Leave to Reply and Reply, FERC Docket No. EL19-92 (Mar. 26, 2020).

380. *New York Indep. Sys. Operator, Inc.,* 125 F.E.R.C. ¶ 61,068, at P 130 (2008), *order on reh'g*, 126 F.E.R.C. ¶ 61,320, at PP 35–36 (2009).

381. David B. Patton, Pallas LeeVanSchaik, Jie Chen, & Raghu Palavdi Naga, *2018 State of the Market Report for the New York ISO Markets*, POTOMAC ECON. (May 2019), https://www.nyiso.com/documents/20142/2223763/2018-State-of-the-Market-Report.pdf.

382. *See supra* notes 199–205 and accompanying text. *See also New York Indep. Sys. Operator, Inc.,* 143 F.E.R.C. ¶ 61,059, at P 232 (2013) (noting argument by transmission developers that the 80% supermajority voting rule is unduly discriminatory).

383. Judy Chang, *Cost Savings Offered by Competition in Electric Transmission*, BRATTLE GRP. (Nov. 19, 2019), https://pubs.naruc.org/pub/656DDB87-F249-7EBF-8516-9BBB7AA1FE5F.

384. *Id*.

V. TO TRIGGER FURTHER PLANNING REFORMS, FERC SHOULD DISCIPLINE IOU LOCAL TRANSMISSION SPENDING

> It is difficult to change the direction of large electric power systems—and perhaps that of large sociotechnical systems in general—but such systems are not autonomous. Those who seek to control and direct them must acknowledge the fact that systems are evolving cultural artifacts rather than isolated technologies. As cultural artifacts, they reflect the past as well as the present. Attempting to reform technology without systematically taking into account the shaping context and the intricacies of internal dynamics may well be futile. If only the technical components of a system are changed, they may snap back into their earlier shape like charged particles in a strong electromagnetic field. The field also must be attended to; values may need to be changed, institutions reformed, or legislation recast.[385]

The power sector has changed since the days when the benefits of unchecked IOU coordination outweighed the potential advantages of open competition. New technologies, market structures, operational methods, and public policy goals have since taken the industry into once unforeseeable directions. Transmission development should evolve to meet these needs. To the extent that there was ever any rationale for bestowing upon local monopolists the collective responsibility of shepherding the development of our interstate networks, those justifications are no longer valid. IOUs are creatures of the early twentieth century, designed to focus on their state-granted service territories. Their local purpose and local monopolies should not constrain the evolution of the nation's transmission systems. Twenty-five years ago, FERC finally confronted IOU transmission dominance, ordering reforms that restructured the industry. Ten years ago, FERC attempted to unleash competitive regional transmission development, but obstructionist IOUs, claiming entitlements to perpetual local transmission monopolies, have evaded competition by changing rules and retreating to non-competitive development processes. I propose that FERC spark bottom-up reforms by targeting IOU-run local planning.

Procedural reforms in Order No. 890 require IOUs to share information about their local plans in order to facilitate public participation and scrutiny. But FERC itself fails to examine IOUs' transmission development plans or subsequent investments. Implicitly, it relies on other parties to discipline IOU spending. This abdication of its core ratemaking authority is an unjustified giveaway to IOUs that biases them in favor of non-competitive local investments over larger scale projects or more cost-effective non-transmission technologies.[386]

FERC should reverse its longstanding adoption of a presumption that all transmission expenses are prudent[387] and replace it with a presumption that only capital expenditures committed pursuant to an independently administered planning process are prudent. For all other transmission expenses, FERC should place

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385. HUGHES, *supra* note 51, at 465.

386. State transmission siting processes that require IOUs to demonstrate "need" for new infrastructure are no substitute for FERC's oversight. FERC is uniquely situated to review transmission investments holistically, rather than on a project-by-project basis as state siting authorities do. As FERC explained in Order No. 1000, a holistic review should consider whether local needs can be met more cost-effectively through the regional planning process than through IOUs' separate local projects.

387. *Iroquois Gas Transmission System, L.P.*, 87 F.E.R.C. ¶ 61,295, at p. 62,168 (1999) (quoting *Minnesota Power & Light Co.*, 11 F.E.R.C. ¶ 61,312, at pp. 61,644–45 (1980); *Id.* (stating that FERC adopted this policy as "a matter of procedural practice to ensure that rate cases are manageable").

the burden of proof to establish prudence back on IOUs in any section 205 filing seeking transmission rate increases.[388] FERC's prudence review is necessary to protect customers and ensure just and reasonable rates.[389] A heightened standard of review is sensible where FERC's planning oversight is less robust and the development process is controlled by the IOU seeking the rate increase.

To implement this policy change, FERC should craft a policy, embodied in a policy statement or developed through a rulemaking,[390] that delineates requirements of "independently administered" planning, outlines how IOUs can demonstrate prudence, and provides limited exceptions related to reliability, the dollar value of projects, or other metrics. The policy should also address how FERC's prudence review will apply to formula rates[391] and whether FERC will end, on a prospective basis, its policy allowing state regulation of transmission rates when they are included as part of a bundled retail rate.[392] Placing the burden on IOUs is clearly within FERC's legal authority. Section 205 explicitly states that an IOU seeking to increase rates has the burden to prove that its proposal is just and reasonable.[393] FERC ought to insist that IOUs meet the statute's explicit command by proving prudence in their section 205 filings.

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388. IOUs and planning entities should only be pursuing prudent transmission investments. FERC should disclaim recent statements that suggest prudence and planning are not one in the same. *See, e.g., Cal. Pub. Utils. Comm'n v. Pac. Gas & Elec. Co.*, 164 F.E.R.C. ¶ 61,161, at P 34 (2018) ("This is a concern about self-interest as a cause of imprudent investment, which is subject to review in the ratemaking process and, as such, is ancillary to the transmission planning process.").

389. Paul L. Joskow, *supra* note 247, at 13 ("For all intents and purposes the FERC [transmission] regulatory process is a model of cost pass-through regulation with little scrutiny of costs.").

390. FERC's current prudence policy is nearly four decades old. *See New England Power Co*., 31 F.E.R.C. ¶ 61,047 (1985), *reh'g denied*, 32 F.E.R.C. ¶ 61,112 (1985). FERC has a well-established process for developing policy guidance through notice-and-comment procedures. *See, e.g., Inquiry Regarding the Commission's Policy for Determining Return on Equity*, 171 F.E.R.C. ¶ 61,155, at PP 1–17 (2020). Because policy statements are "not binding" on FERC, *see* Consolidated Edison Co. v. FERC, 315 F.3d 316, 319 (D.C. Cir. 2003); Interstate Natural Gas Ass'n of Am. v. FERC, 285 F.3d 18, 59 (D.C. Cir. 2002), a policy statement may provide FERC with more flexibility to tailor its approach as it develops more experience with its new prudence policy.

391. "With formula rates, the formula itself is the rate, not the particular components of the formula, such as the ROE. Thus periodic adjustments made in accordance with the Commission-approved formula do not constitute changes in the rate itself and accordingly do not require section 205 filings." *Ocean State Power II*, 69 F.E.R.C. ¶ 61,146, at p. 61,544 (1994). IOUs with formula rates would not need to make a section 205 filing to increase rates to reflect a larger ratebase due to transmission expansion.

392. *See, e.g., In Re Joint Application for the Transfer of Ownership and Control of Entergy Mississippi's Transmission Facilities*, Mississippi Public Service Commission, Docket No. 2012-UA-358, at P 43 (Dec. 10, 2013) (explaining that MISO's "bundled load exemption" exempts a vertically integrated IOU from certain MISO transmission charges and allows it reserve the portion of the its transmission revenue requirement that is designated to native load to state regulation, thus allowing state regulators to determine the rate of return on those transmission assets and review prudence). I recognize that preempting state regulation may be too controversial and might run the risk of sidetracking FERC's new prudence policy. It would be worth investigating the proportion of new transmission investments that is, in practice, regulated by states.

393. 16 U.S.C. § 824d(c) ("At any hearing involving a rate or charge sought to be increased, the burden of proof to show that the increased rate or charge is just and reasonable shall be upon the public utility . . . "). FERC has authority to deny inclusion of an IOUs' transmission investments. *See Public Service Co. of New Mexico*, 75 F.E.R.C. ¶ 61,266, at p. 61,859 (1996) (stating that FERC's policy of equally sharing prudently incurred cancelled plant costs between ratepayers and shareholders applies to transmission investments and requiring the IOU to file revised rates that reflect inclusion of only 50% of the project's costs).

The specter of FERC's prudence review could have significant effects on transmission planning. Ideally, FERC's policy would convince IOUs to place all transmission planning — regional and local (subject to carve-outs allowed under the policy) — under the control of an independent entity.[394] In transmission operations, separating ownership from operational control allowed the industry to capture benefits of both coordination and competition. Separating ownership from control over planning could have similarly significant benefits by untethering planning from IOU's state-granted advantages. In addition, unifying local and regional planning could finally achieve the promise of Order No. 1000 by leading to more cost-effective portfolios of projects.[395]

FERC should take three additional steps to enhance the independence of transmission planners. First, FERC should reduce planners' reliance on IOUs for information, which might free RTOs from a measure of undue influence that IOUs may currently be able to exert on the planning process. FERC should require IOUs to disclose all transmission information relevant to planning processes and, where transmission is independently planned, mandate that planners independently verify the accuracy of that information.[396] Second, FERC should order

394. Opponents of independent planning might argue that FERC does not have authority to regulate entities in non-RTO regions because they that are not "public utilities" under the FPA. In non-RTO regions, the regional planning entities do not file tariffs with FERC. IOUs participating in those regional processes met their Order No. 1000 obligations by amending their own OATTs. *See, e.g., Avista Corp., et al.,* 143 F.E.R.C. ¶ 61,255 (2013). These regional planning entities do not meet FERC's "independence" criteria. Two of these six entities are governed by their member utilities. Three are run by boards with utility and stakeholder members. The remaining organization, ColumbiaGrid, has an independent board appointed by its member utilities, although each of the three current board members is a recently retired executive of a member utility. Review of Recent Regional Plans, *supra* note 197, at 7; https://www.columbiagrid.org/board-of-directors.cfm. FERC might take one of two approaches to regulating these entities. First, it could continue its practice of regulating regional planning through member IOU filings. While IOUs would retain section 205 rights, they could create procedures that would require them to defer to independent management of the planning entity. Should FERC find that IOUs are interfering with the planning entity, it could conclude that the planning process is not independent and therefore require IOUs to demonstrate prudence. Second, FERC could instead adopt the approach it articulated in the RTG policy statement, where it concluded that although RTGs were not public utilities, their agreements "affect or relate to jurisdictional transmission rates or services" and therefore must be filed under section 205. RTG Policy Statement, *supra* note 217, at 41,629.

395. IOUs might argue that local transmission remains a natural monopoly because having a single entity physically operate all of the local transmission facilities is more cost-effective than having numerous entities Coordinate the local transmission assets that each company owns. FERC has broad jurisdiction over all transmission facilities and could potentially replicate its open-access mandate for the physical operation of transmission facilities. It might order IOUs, which typically operate local transmission control rooms, to offer to contract with other owners for the physical operation of their facilities.

396. RTOs currently verify performance characteristics of generation and demand-side resources but may not have similar practices with regard to transmission infrastructure. *See, e.g., PJM Interconnection*, 171 F.E.R.C. ¶ 61,210 (2020) (approving tariff amendments that "will enhance the testing requirements for Demand Resources and Price Responsive Demand . . . to better reflect true load reduction capabilities during actual event conditions"); *PJM Interconnection*, 172 F.E.R.C. ¶ 61,055 (Glick concurring) (noting that FERC has "recently required PJM to include in its tariff a provision that would require Market Sellers to submit accurate ramp rates"); *TranSource v. PJM*, 168 F.E.R.C. 61,119 at PP 154–157 (2019) (noting that the PJM tariff does not require PJM to verify IOU-provided transmission facility ratings).

planners to engage third-party evaluators to oversee the project selection process.[397] Third, where planners use the solicitation model to select project developers, FERC should require them to hand that function to a third party. RTOs and other planning entities may be ill-equipped to evaluate development proposals, particularly where their IOU members are competing against other companies.

Even if FERC's new prudence policy does not induce IOUs to cede planning decisionmaking authority, it may still mitigate IOU transmission dominance. Prudence reviews might include state regulators, consumer advocates, generation developers, rival transmission companies, and entities advocating for deployment of technologies that can obviate new transmission. Information provided by these parties and scrutinized by FERC staff may cause IOUs to propose different projects than they otherwise would. I suspect that, with money on the line, IOUs might disclose more information than they already do pursuant to Order No. 890.

FERC could reject IOU project proposals if it has evidence that consumers would be better served by more cost-effective alternatives. This more pro-active prudence policy would cast FERC as the central planner, a role that it may not be suited to play. To pull it off, it might need additional staff, perhaps housed in a new office dedicated to transmission oversight.[398] The goal of the policy, however, is not to plan all transmission development in Washington, D.C., but to spur improvements to planning processes around the country administered by independent entities.

FERC's prudence policy could also partially mitigate the effects of discriminatory state laws that impede non-IOU transmission development. Following Order No. 1000, several states in the MISO and SPP regions enacted right-of-first refusal laws.[399] For example, Minnesota's ROFR law grants IOUs and other owners of in-state transmission lines rights to build any project planned by MISO that connects to the incumbent transmission owner's facilities within the state's boundaries. When the incumbent utility invokes its ROFR, FERC could establish a presumption that the utility's investment is imprudent unless the utility adopts the terms and conditions proposed by the developer awarded the project by the RTO through its competitive process. This presumption would undoubtedly benefit consumers, as it would effectively force IOUs to either adopt terms and conditions that result from a competitive process or it would lead IOUs to decline to exercise

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397. Order No. 1000, *supra* note 189, at P 330 (declining to adopt this suggestion); *but see* Order No. 872, *Qualifying Facility Rates and Requirements*, 172 F.E.R.C. ¶ 61,041, at PP 413, 435 (allowing states to set avoided cost rates under PURPA through competitive solicitations and requiring oversight of such solicitations by an "independent administrator").

398. Energy law scholar Richard Pierce has explained that:

> [i]n order to succeed, any attempt to establish the imprudence of a utility's decision to construct a new plant would require extraordinarily large expenditures for the services of lawyers, economists, and engineers. Litigation costs of this magnitude exceed the resources available to most of the consumer groups and governmental bodies that participate in rate cases. Thus, the fact that utility decisions to build new plants are rarely held to be imprudent does not necessarily support an inference that virtually all such decisions are prudent.

Richard J. Pierce, *The Regulatory Treatment of Mistakes in Retrospect: Cancelled Plants and Excess Capacity*, 132 UNIV. OF PENN. L. REV. 497, 512 (1984).

399. *See* Neb. Rev. Stat. §70-1028; N.D. Cent. Code §49-03- 02.2; S.D. Codified Laws §49-32-20; Tex. Utils. Code §37.056(e)-(f); 17 Okla. Stat. §292; Ind. Code §8-1-38-9(a)-(b); Iowa H.F. 2653, Div. XXXIII (2020).

their state ROFRs when they are unwilling to adopt competitively determined terms and conditions.

If IOUs do not voluntarily cede planning to an independent entity, FERC could force IOUs to do so. To justify this move, FERC could point to its recent orders on minimum offer price rules (MOPRs) in capacity markets. In several orders, FERC claimed that to ensure just and reasonable capacity rates it must nullify advantages that states provide to particular resources that offer into the auction.[400] While there are numerous factual differences between capacity auctions and transmission development, FERC has identical legal authority under section 206 to remedy unjust and unreasonable rates caused by advantages conferred on particular market participants by state law.[401] Applying the MOPR logic to transmission planning, FERC could neutralize advantages that IOUs have in transmission development that are traceable to their exclusive service territories, captive ratepayers, and discriminatory siting laws.

If it chooses not to exercise its newly discovered power to nullify the economic effects of state laws (or if FERC reverses course on MOPRs), FERC could argue that the D.C. Circuit decision rejecting challenges to Order No. 1000 provides a sufficient legal basis for further reforms, including efforts to mitigate IOU advantages in local planning processes. The D.C. Circuit's decision affirmed that FERC has broad discretion to define unduly discriminatory conduct and remedy such conduct in transmission planning processes.[402] The court did not limit FERC's broad authority to regional planning or establish any legal barrier that prevents FERC from imposing new procedures in local planning, requiring planning be independently administered, or subjugating IOUs' local planning outcomes to the regional process.

Regardless of whether FERC mandates independent planning or IOUs voluntarily join independently run planning organizations, the efficacy of FERC's reforms depend in part on states' cooperation. Many states have been willing participants in IOU efforts to stifle competition.[403] Using their nearly exclusive authority over transmission siting, states can effectively veto pro-competitive reforms by refusing to provide siting permission to a non-IOU or out-of-state

400. *See, e.g., Calpine Corp., et al., v. PJM,* 169 F.E.R.C. ¶ 61,239 (2019), *reh'g denied,* 171 F.E.R.C. ¶ 61,035 (2020).

401. It remains to be seen whether FERC's order will be upheld in federal court. Litigation is pending as of publication of this article. Illinois Commerce Comm'n. et al., v. FERC, Seventh Cir. Docket No. 20-01645.

402. *See* South Carolina Pub. Serv. Authority v. FERC, 762 F.3d 41, 57–69 (D.C. Cir. 2014) (upholding Order No. 1000 in part due to the FPA's "broadly stated" authority to remedy anti-competitive practices even where FERC's action is premised on a "theoretical threat" to just and reasonable rates, such as the absence of competition); *see also* Eisen, *supra* note 22; Ari Peskoe, *Easing Jurisdictional Tensions by Integrating Public Policy in Wholesale Electricity Markets*, 38 ENERGY L.J. 1 (2017).

403. FERC's efforts to facilitate development of competitive power markets illustrate the importance of complementary state action. By 1999, three years after FERC issued Order No. 888, all but one state within the three former northeastern tight power pools enacted legislation or took administrative action to restructure utilities. Texas and California also enacted their own restructuring laws. By ordering or incentivizing utilities to sell their power plants or spin-off their generation assets into an affiliated company, state restructuring efforts seeded burgeoning wholesale markets with non-IOU power suppliers and created demand for wholesale power. Following restructuring, IOUs that had relied on their own power plants to supply captive ratepayers had to turn to the wholesale market to meet local demand.

developer. Indeed, numerous states, often with IOU support,[404] have blocked non-IOU transmission development by providing IOUs with ROFRs,[405] refusing to site non-IOU projects,[406] and rejecting innovative merchant projects that do not align with traditional notions of the "public convenience and necessity" standard that regulators must meet in order to provide siting permission.[407]

Congress could preempt state siting authority or at least prevent states from enforcing their most anti-competitive laws, such as ROFRs. In 2005, in its first major energy legislation since FERC issued its Open-Access mandate, Congress provided FERC with limited authority to site transmission lines in areas designated by the Department of Energy as having transmission congestion or capacity constraints.[408] FERC has never used this siting authority successfully, in part because a federal appeals court interpreted the provisions narrowly.[409]

In the same bill, Congress also repealed Part I of the 1935 Public Utility Act, paving the way for a wave of utility mergers and perhaps ushering in a new era of IOU transmission dominance.[410] The twenty largest U.S.-based publicly traded transmission owners (as measured by miles) have a combined market capitalization of nearly $700 billion (not including Berkshire-Hathaway, the second largest transmission owner that itself is valued at more than $500 billion).[411] These companies' assets are increasingly reliant on cost-of-service ratemaking as several companies have shed competitive lines of business.[412] Suffice it to say, these

404. *See supra* note 259; *see also* Brief of the Edison Electric Institute, *LSP Transmission Holdings v. Sieben*, Docket No. 18-2559 (8th Cir. Jan. 14, 2019) (supporting Minnesota's ROFR law).

405. *See, e.g.,* LSP Transmission Holdings v. Sieben, et al., 954 F.3d 1018 (8th Cir. 2020) (affirming lower court's dismissal of Dormant Commerce Clause Challenge to Minnesota's ROFR law, which was enacted in 2012).

406. *See, e.g.,* Illinois Landowners All., NFP v. Illinois Commerce Comm'n, 90 N.E.3d 448 (2017) (holding that regulators are prohibited from granting a certificate of convenience and public necessity to a merchant transmission company because it was not a "public utility" under state law); Iowa Senate File 516, Secs. 55–60 (2016) (preventing merchant developers from acquiring land via eminent domain); Ark. Code § 23-3-205 (prohibiting regulators from issuing a certificate to anyone other than a public utility or an entity designated by an RTO).

407. *See, e.g.,* Missouri Public Service Commission, Report and Order, File No. EA-2014-0207 (July 1, 2015) (rejecting Grain Belt Express); Arkansas Public Service Commission, *In the Matter of the Application of Plains and Eastern Clean Line LLC*, Docket No. 10-041-U (Jan. 11, 2011) (rejecting Plains and Eastern line).

408. Energy Policy Act of 2005, Pub. Law. No. 109-58, § 1221 (2005).

409. Piedmont Environmental Council v. FERC, 558 F.3d 304 (4th Cir. 2009).

410. *See* Scott Hempling, *Inconsistent with the Public Interest: FERC's Three Decades of Deference to Electricity Consolidation*, 39 ENERGY L. J. 233, 251 (2018) (finding that 13 holding companies own what used to be 82 independent IOUs, and only 18 IOUs are remain unconnected to other IOUs).

411. Calculation based on market capitalizations as of January 1, 2021, as reported by finance.yahoo.com. Transmission ownership is derived from FERC Form 1 data, as compiled by Catalyst Cooperative. Zane A. Selvans and Christina M. Gosnell, FERC Form 1 Database v 1.0.0 (1994-2018), ZENODO (2020), https://zenodo.org/record/3677548#.YGyaMBRuc-Q. Note that some major transmission owners are not U.S. based, including Avangrid (owned by Spanish company Iberdrola) and Fortis (Canada). American Transmission Company is privately owned.

412. Conor Harrison, *Electricity Capital and Accumulation Strategies in the U.S. Electricity System*, ENV'T AND PLANNING E: NATURE AND SPACE (Aug. 27, 2020), https://journals.sagepub.com/doi/10.1177/2514848620949098 ("Despite their flight from merchant markets, investor owned electricity holding companies are not shrinking. Rather, utilities are using the funds raised from the sale of their deregulated businesses to acquire and/or invest in other regulated assets in order to meet financial analysts' expectations for earnings increases."

mega-IOUs and their counterparts[413] are likely to oppose Congressional action that opens transmission to competition or in some way dilutes IOU control over local transmission development.

With states and Congress seemingly unwilling to oppose IOU dominance, FERC appears most likely to take further action. Yet, I acknowledge that IOUs will inevitably (and rationally) resist further FERC reforms designed to chip away at their transmission dominance. Efforts to dismantle the IOU transmission development "cartels"[414] may be delayed through litigation and weakened through implementation. Recognizing the inevitability of IOU backlash, FERC might instead choose to rescind its competitive mandate and direct its reforms towards substantive outcomes, such as motivating more regional investment or incentivizing deployment of new technologies. In that vein, FERC might impose certain technical analyses in the planning process that will cause IOUs and RTOs to select the "right" projects[415] or establish particular goals for regional plans to achieve, such as unlocking new resources or connecting regions. Rules that directly target substantive results may have the side-benefit of addressing IOU dominance by ensuring that projects that harm a particular IOU's parochial interests are nonetheless developed, provided they meet FERC's technical standards.

Replacing Order No. 1000's pro-competition procedural reforms with substantive rules engineered to drive IOU investment into FERC-preferred projects may well mitigate IOU backlash and therefore lead to more regional transmission spending, at least in the short term.[416] It is worth noting that RTO transmission planning efforts held up as gold standards — MISO's Multi-Value Projects (MVP) and SPP's Priority Projects[417] — were approved by RTO boards prior to Order No.

The author observes that these developments have "placed an increasing emphasis on regulatory affairs, as success in the regulatory arena continues as a key accumulation strategy for utilities."); CNBC, SHARES OF FIRSTENERGY SOAR AFTER EMBATTLED UTILITY GETS INVESTMENT FROM ACTIVIST ELLIOTT MANAGEMENT (Jan. 22, 2018) (noting the company's plan to sell its merchant generation assets and quoting FirstEnergy CEO noting the company's plan to "transform FirstEnergy into a fully regulated utility"); Sonia 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); Jared Anderson, *PSEG Considers Shedding Its Non-Nuclear Assets; Cutting Merchant Generation*, S&P GLOBAL (July 31, 2020) (quoting company CEO: "Our intent is to accelerate the transformation of PSEG into a primarily regulated . . . utility."); Lorraine Mirabella, *Exelon, Owner of Baltimore-based Constellation and BGE, Will Split Power and Utility Businesses*, BALTIMORE SUN (Feb. 24, 2021) (reporting that Exelon's board approved a plan to split into two separate, publicly traded companies).

413. U.S. based and publicly traded IOUs with large market capitalizations that are not among the top 20 transmission owners (measured by total miles) include PSE&G ($29.5 billion) and ConEd ($24.2 billion).

414. MISO Transmission Owners, et al. v. FERC, 819 F.3d 329, 335 (7th Cir. 2016) (in upholding FERC's order removing MISO's ROFR, the Seventh Circuit likened RTOs to cartels, in that their members "are seeking to protect themselves from competition from third parties" in transmission development).

415. *See, e.g.,* Burcin Unel, *A Path Forward for the Federal Energy Regulatory Commission*, INST. FOR POLICY INTEGRITY (Sept. 2020) (recommending that FERC require "comprehensive cost-benefit analysis" in transmission planning).

416. *See, e.g.,* Order No. 1000, *supra* note 189, Commissioner Moeller, dissenting in part (criticizing the scope of the Rule's MOPR elimination and concluding that "instead of encouraging more regional cooperation, the rule could ultimately discourage such cooperation by encouraging more local transmission projects").

417. *See, e.g.,* Jay Caspary, Michael Goggin, Rob Gramlich, Jesse Schneider, *Disconnected: The Need for a new Generator Interconnection Policy*, at 21 (Jan. 2021), https://cleanenergygrid.org/wp-content/uploads/2021/01/Disconnected-The-Need-for-a-New-Generator-Interconnection-Policy.pdf.

1000 and therefore parceled out projects to IOUs without competition.[418] Nonetheless, I suggest that while substantive reforms may be necessary, they will be insufficient, and FERC should continue to focus its reforms on IOU transmission dominance for three reasons.

First, FERC has never attempted to dictate substantive outcomes and has in fact explicitly disclaimed that goal.[419] Any rule that aims to influence substantive outcomes would have to be robust enough that planners would be unable to subvert FERC's goal by tailoring the analysis or filtering the results with additional studies designed to either benefit IOUs or achieve results contrary to FERC's goals. FERC would also run the risk that its rule simply will not work and might result in unintended outcomes.

Second, addressing IOU transmission dominance through procedural reforms aligns with FERC's expertise, experience, and legal authority. FERC derived its comparability, information transparency, and independence principles from its statutory duty to remedy unduly discriminatory IOU practices and prescribed them as antidotes to IOUs' anticompetitive behavior. While these principles have proven adaptable, they have not yet liberated transmission development from IOU dominance. Nevertheless, I believe that procedural reforms are necessary, even if FERC also issues substantive rules designed to achieve particular planning goals.

Third, as I have documented throughout this article, IOUs have used their unearned advantages to thwart the development of competitive power markets and transmission development processes. They continue to have incentives and abilities to develop interstate networks that reflect their parochial interests. They are designed to thrive under the status quo, and are ill-suited and unmotivated to facilitate new market entrants and unleash the competitive forces that can allow the sector to realize its innovative potential. Relegating IOUs to participants in the planning process on equal footing with other companies is a necessary step.

Finally, I do not believe that independently administered planning will be a panacea that instantly unlocks innovative transmission projects. Other reforms, particularly to interconnection processes, may be necessary as well.[420] FERC

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418. *Southwest Power Pool*, 131 F.E.R.C. ¶ 61,252, at P 7 (2010); *Midwest Independent System Operator,* 133 F.E.R.C. ¶ 61,221 (2010).

419. Order No. 1000, *supra* note 189, at P 149. *South Carolina Pub. Serv. Auth.*, 762 F.2d at 57–58 (FERC "disavowed that it was purporting to 'determine what needs to be built, where it needs to be built, and who needs to build it.' As the Commission explained on rehearing, 'Order No. 1000's transmission planning reforms are concerned with process' and 'are not intended to dictate substantive outcomes.'").

420. *See MISO*, 174 F.E.R.C. 61,084 (2021) (Commissioner Clements, concurring) ("[I] am concerned that the status quo in MISO risks discrimination by transmission owners" in the interconnection process); *MISO*, 172 F.E.R.C. ¶ 61,248 (2020) (Commissioner Glick, dissenting) ("I remain concerned . . . that the Commission's determination on remand will provide an opportunity for transmission owners to favor their own generation and create an environment where similarly-situated interconnection customers pay higher network upgrade costs . . . ."); *Anbaric Development Partners v. PJM*, 171 F.E.R.C. ¶ 61,241 (2020) (denying complaint filed by merchant transmission developer about PJM interconnection rules and setting issues for technical conference); *TranSource v. PJM*, 168 F.E.R.C. ¶ 61,119 (2019) (reversing ALJ's conclusion that PJM interconnection practices were non-transparent and unduly discriminatory but finding PJM's tariff omits material terms on interconnection studies and that PJM made errors in processing interconnection studies); Caspary, et al, *supra* note 417.

might also consider expanding the scope of its independence principle, in part by revisiting allocations of filing rights between RTOs and IOU members.[421]

VI. CONCLUSION

FERC-set rates support the development of more than $20 billion of transmission facilities each year.[422] This safe investment opportunity is available primarily — in fact, nearly exclusively — to IOUs. Their incentives to protect their superior access to this lucrative arrangement drive a defensive approach to transmission development that prioritizes projects that they can build without competition and with little oversight. This development model breeds collusion among IOUs who promote transmission rules designed to shield their state-granted territories from outside developers.

FERC's efforts to break up the IOU transmission clubs have not yet pried control over transmission development from IOUs. FERC's comparability and transparency principles have mitigated IOU transmission dominance but, without further reforms, the IOU transmission syndicate may indeed be forever. To foster innovation and facilitate development of interstate networks that meet twenty-first century needs, FERC should disentangle transmission planning from IOUs' financial and strategic interests.

421. *Supra* notes 136–138 and accompanying text.

422. Edison Electric Institute, *supra* note 213, at 23.