

ENERGY LAW JOURNAL

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2023

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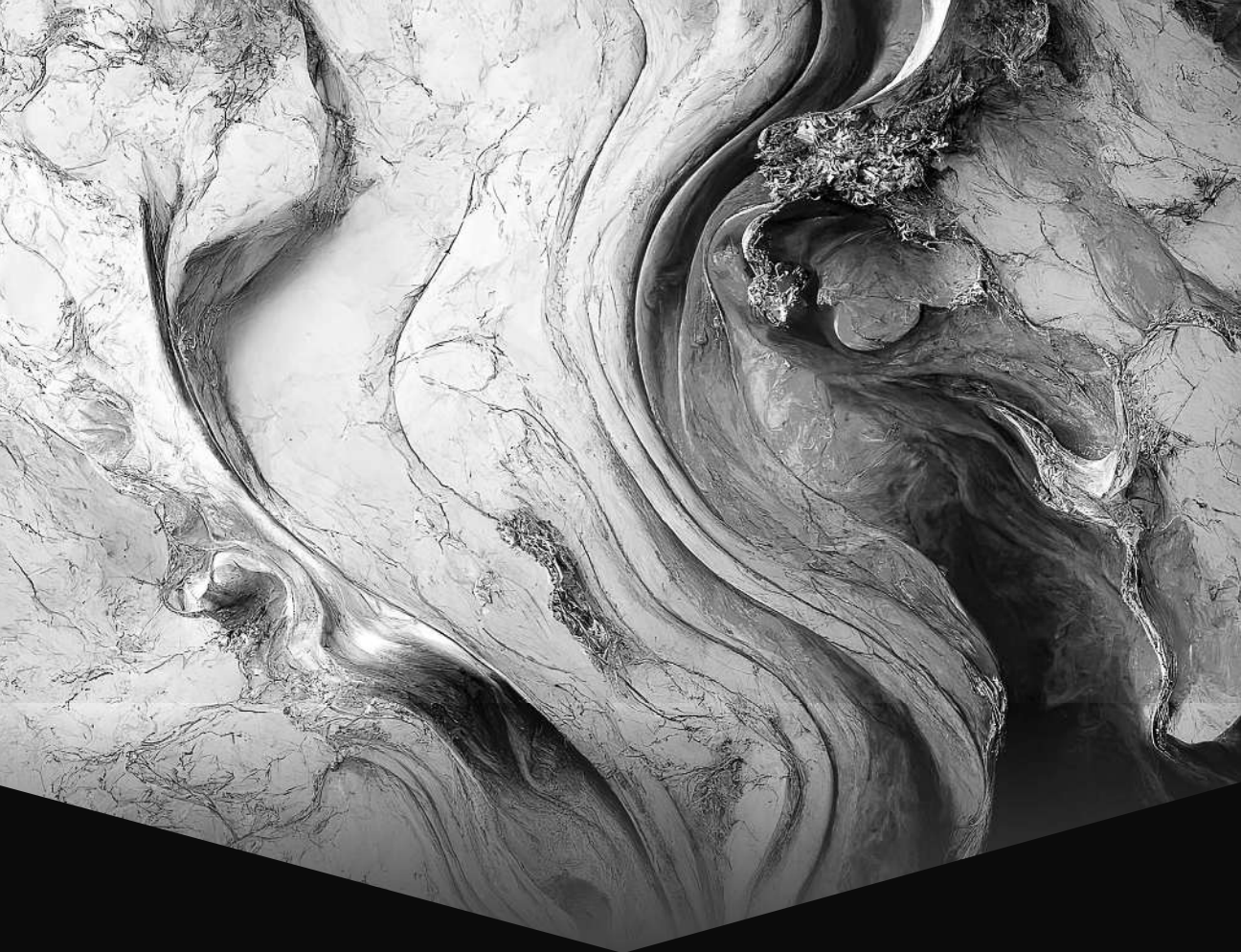
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FORWARD*

Let's start with a fundamental point: the governance of RTOs matters. It matters to the RTO members who provide transmission services; it matters to their customers who buy transmission services; it matters to the land and ecosystems that RTOs use and to the people that depend upon electrical systems for reliable power. And RTO governance matters to those seeking a fair price signal for today's and tomorrow's electric power, including emerging sources of renewable generation, and it matters to those considering alternatives, such as end-use efficiency.

What was once a "bench-scale" hobby for curious gentlemen-scientists has now become a vital source for light, power, heat and cooling, household appliances, transportation, shipping and telecommunications, with new electronic functions (such as bitcoins and artificial intelligence) rapidly emerging.

At the same time, a new understanding of the true costs of electricity has eroded the perception of ever-increasing net value. Toxic emissions, labor injuries, extraction, and heavy metal discharges continue; and are now joined by the literally existential question of contributions to climate change, enhanced by fossil fuel combustion.

Our power systems, rooted in a technology that clearly is "affected with the public interest" now face key questions, primarily how to balance the positive and negative aspects in the pursuit of public interest.

Should electricity be provided by private enterprise, which might or might not be natural monopolies, or by municipal, state or federal governments? What are the potentials for market-based pricing? And, inevitably, WHO should resolve the economic, technological, political and environmental issues that grow in tandem with society's reliance on electricity?

Trying to balance these concerns, the Federal Energy Regulatory Commission (FERC) created Regional Transmission Organizations (RTOs); quasi-governmental organizations co-ordinating transmission systems as large as, or larger than, all but the largest states. FERC charged them with three key goals: reliability, planning and the use of market mechanisms to develop prices for wholesale power transactions.

Yet those three focal points are not the only aspects of electric systems that affect the general good and there has been a huge range of opinions on the desirability and feasibility of RTOs as a mechanism for enhancing social goals beyond reliability, network planning and monetized energy pricing.

Rachel Goldwasser and I were among those commenting.¹ Our 2007 article on ensuring consideration of the general good recommended two methods for maximizing the merit of RTOs. First, explicitly require consideration of the pub-

* This special edition was made possible with support of the RTO Governance research network, a multi-institution initiative aimed at highlighting the ways in which the governance of Regional Transmission Organizations and other regional power grid entities can affect market, reliability, environmental and equity outcomes in the electricity sector. The RTO Governance network is administered through the Center for Energy Law and Policy at Penn State University and is supported financially by the Alfred P. Sloan Foundation, the Heising Simons Foundation and the U.S. National Science Foundation.

1. Michael H. Dworkin & Rachel Aslin Goldwasser, Ensuring Consideration of the Public Interest in the Governance and Accountability of Regional Transmission Organizations, 28 ENERGY L.J. 543, 553 (2007).

lic interest in the governance and accountability of RTOs. Second, make consideration of the public interest a necessary precondition to authorizing those RTOs to create and enforce the rules for full-scale electric services, and for transmission and related wholesale services, in lieu of cost-of-service regulation or other traditional mechanisms.

That article was published sixteen years ago, but the debate continues at the FERC, in legislatures, and in judicial and academic deliberations. In one sense the issue is unlikely to be ever fully resolved because the power grid is so complex that there will inevitably be discretionary judgment calls that require consideration of many details of day-to-day operations. Indeed, that is one of the fundamental reasons that governance and accountability are so important. While the network may never be perfected, it can be improved. The essays accompanying today's special edition of the Energy Law Journal are serious and valuable contributions to our understanding of what it means to turn the general consideration of the public interest into a meaningful and effective reality.

These essays explore:

- Efforts within FERC's own processes (centered around Order No. 719) to encompass additional goals such as grid reliability, managing congestion, and coordinating planning for critical new construction.²
- The consequences of state defection from wholesale markets.³
- The impact of regional governance on eNGOs incorporating environmental concerns.⁴
- Recommendations for increasing effective participation of eNGOs in RTO governance.⁵
- The evolution of participatory policy-making for regional power grids.⁶
- Replacing the "utility transmission syndicates" control over decision-making processes.⁷

2. Michael D. Helbing, *Fifteen Years Later – Literature Perspectives on the Impacts of Dworkin and Goldwasser and FERC Order No. 719*, 44 ENERGY L.J. 325 (2023).

3. Travis Dauwalter et al., *Coalition Stability in PJM: Exploring the Consequences of State Defections from the Wholesale Market*, 44 ENERGY L.J. 441 (2023).

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5. Mark James et al., *Incorporating Environmental Concerns into Wholesale Electric Markets: Recommendations for Increasing Effective Participation of eNGOs in RTO Governance Stakeholder Processes*, 44 ENERGY L.J. 493 (2023).

6. Nicholas Johnson et al., *The Evolution of Participatory Policy-Making for Regional Power Grids*, 44 ENERGY L.J. 533 (2023).

7. Ari Peskoe, *Replacing the Utility Transmission Syndicate's Control*, 44 ENERGY L.J. 547 (2023).

Together, these essays offer insights and tools that could help the RTOs enhance the public interest. However, for them to have practical effects that go beyond the realm of academia, I urge a clear affirmation by FERC that the governance of healthy wholesale markets by RTOs include consideration of the general good, including both the interests of market participants and the interests of others affected by the decisions of the RTOs and their regulators.

Michael Dworkin**

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** In the past he has served as Chairman of the Vermont Public Service Board, President of the New England Conference of Public Utility Commissioners, and as Director on the Boards of the Electric Power Research Institute (Executive Committee), the Vermont Power Company (VELCO), and the Vermont Energy Investment Company (VEIC). He was 12 times elected as Moderator of the Annual Meeting of the Town of East Montpelier, Vermont.

EDITOR IN CHIEF'S NOTE

Since its inception more than forty years ago the Journal has published two volumes a year. That changed when Michael Dworkin and Seth Blumsack approached me with the idea of publishing a special edition devoted to the issue of RTO governance. We had first tackled the general subject more than fifteen years ago with the publication of an article by Michael and his co-author, Rachel Goldwasser – *Consideration of the Public Interest in the Governance and Accountability of Regional Transmission Organizations*.¹ Michael, Professor of Law Emeritus at Vermont Law and Graduate School and Seth, Professor of Energy Policy and Economics and Co-Director of the Center for Energy Law and Policy at the Pennsylvania State University (Penn State), had been discussing revisiting the subject with various prospective authors for several years. Their efforts had come to fruition when they received commitments from those authors and when the Journal board of directors agreed that the Journal would be the right place to publish their work in a special edition.

Key to the process coming together were two commitments. First, the students at the University of Tulsa College of Law generously agreed to take on the extra load of a third volume in 2023. Second, because, even with their best efforts, they could not undertake that burden alone, Tulsa's Student Editor in Chief agreed to supervise the cite checking and editing work by law students at Penn State, who agreed to help review and edit several of the articles in this special edition.

Let me finally express the Journal's thanks to Seth Blumsack and Penn State for agreeing to fund the printing of this special edition. This means that EBA members who have subscribed to hard copies of the Journal will receive a third volume this year at no additional cost.

Harvey L. Reiter
November 2023
Washington, DC

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

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FIFTEEN YEARS LATER – LITERATURE PERSPECTIVES ON THE IMPACTS OF DWORKIN AND GOLDWASSER AND FERC ORDER NO. 719

*Michael D. Helbing**

Synopsis: In the several decades since they were first established, the roles and responsibilities of regional transmission organizations and independent system operators have evolved and expanded, while the electricity market itself has become more complex as a result of emerging technologies and social and regulatory pressures to reduce carbon emissions. The combination of these factors has led numerous commentators to question whether RTOs’ and ISOs’ governance structures are adequate to guide the organizations in an increasingly complex – and scrutinized – environment. This article summarizes the critiques and suggestions regarding RTO/ISO governance from academic literature. It then synthesizes those contributions into a discussion of the aspects of governance that appear to work well and those that may be considered targets for future reform.

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I. INTRODUCTION

Regional transmission organizations (RTOs) and independent system operators (ISOs) are organizations founded on the ideal of providing non-discriminatory access to regional electric transmission grids.¹ But over time, the roles of RTOs and ISOs have expanded to encompass additional operations associated with moving electricity from generators to end-users.² Those tasks include ensuring grid

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1. *RTOs and ISOs*, FERC, <https://ferc.gov/power-sales-and-markets/rtos-and-isos> (last visited Oct. 28, 2023).

2. Michael H. Dworkin & Rachel Aslin Goldwasser, *Ensuring Consideration of the Public Interest in the Governance and Accountability of Regional Transmission Organization*, 28 ENERGY L.J. 543, 553 (2007).

reliability, managing congestion, overseeing grid expansion, scheduling transmission, monitoring markets, and coordinating planning for critical new transmission lines, among other things.³ Many of these individual tasks have become more complex as the electricity market has evolved with the addition of emergent forms of energy generation, such as wind and solar. These new technologies hold great promise for reducing society's dependence on fossil fuels, but they also add variability and uncertainty to the electric grid that RTOs and ISOs are being asked to manage with precision.

As a result of their outsized role in managing numerous elements of our electricity system, the governance of RTOs and ISOs is important not only to the proper functioning of the grid but also to many other social issues of great interest. Among other things, RTOs and ISOs now impact energy security and the fight against climate change because of their ability to control when, how, and even if, new energy generation sources come online. The concept of governance includes not only the question of which individuals or groups within an organization have authority to take which actions, but also what processes and rules the decision-makers must follow when acting. Depending on what those processes and rules permit, decision-makers may be able to act either with relative independence or subject to strict accountability from the outside. In that way, these governance structures – especially structures that impose accountability – can play a significant role in affecting the substantive outcome of the RTOs' and ISOs' decisions.

Because RTOs and ISOs exist in an unusual space between private and public governance – neither owing allegiance to shareholders as publicly held corporations nor subject to public accountability as government agencies – finding the proper balance of independence and accountability in developing a governance structure for RTOs and ISOs has proved challenging. That challenge has only grown as both their operations and the markets they oversee have become more complex.

In 2007, Michael H. Dworkin and Rachel Aslin Goldwasser published what has proved to be an enduring critique of RTO governance.⁴ In that piece, Dworkin and Goldwasser focus especially on the role of the public in the operations of RTOs and ISOs.⁵ Shortly thereafter, the Federal Energy Regulatory Commission (FERC) issued Order No. 719, meant to improve, among other things, stakeholder responsiveness in RTO/ISO governance.⁶ Since that time, several authors have opined on the pros and cons of the existing governance structures. As illustrated by the sections that follow, many have suggested modifications to the existing system to make it more responsive to the public interest. This article seeks to survey those numerous contributions to the literature and to amplify some of the aspects of RTO governance that appear to work well and those most in need of reform. Building from Dworkin and Goldwasser's strong foundation, it suggests

3. *Id.*

4. *See generally* Dworkin, *supra* note 2.

5. *Id.*

6. Order No. 719, *Wholesale Competition in Regions with Organized Electric Markets*, 125 FERC ¶ 61,071 P 7 (2008).

that the drawbacks to RTO and ISO governance first identified in 2007 continue to generate concern.

II. RTO/ISO FORMATION AND STRUCTURE

RTOs and ISOs emerged in the 1990s and 2000s out of FERC initiatives to encourage open access to transmission infrastructure.⁷

Historically, electricity was provided to end users in the United States by vertically integrated utilities that built and owned generation, transmission, and distribution infrastructure.⁸ Starting in the 1990s, FERC tried to increase competition in the electricity industry by remedying “undue discrimination in access to the monopoly owned transmission wires that control whether and to whom electricity can be transported.”⁹ In furtherance of that purpose, FERC issued Orders No. 888 and 889 in April 1996.¹⁰ Order No. 888 allowed groups of electricity generators, transmission owners, and utilities to form ISOs that could collectively design and operate electric system operations, including operational control over transmission resources.¹¹ Order No. 888 provided guidance as to how those ISOs should be formed and governed.¹² Order No. 889 provided further incentives for transmission operators to join an ISO, but did not include substantial guidance regarding governance.¹³

FERC went a step further in 1999 with Order No. 2000.¹⁴ In that order, FERC amended its regulations to encourage the formation of RTOs.¹⁵ That order included a list of “minimum characteristics and functions” that each RTO must have, building from and slightly modifying the list of characteristics initially required for ISOs in 1996.¹⁶ Those minimum characteristics and functions included, among other things, requirements that touched on governance of the RTO, including independence,¹⁷ tariff administration and design,¹⁸ and ancillary services.¹⁹ Today, the distinction between an RTO formed pursuant to Order No. 2000 and an ISO formed under Orders No. 888 and 889 is not significant.²⁰

7. *RTOs and ISOs*, *supra* note 1; see Order No. 888, *Promoting Wholesale Competition Through Open Access Non-discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities*, 75 FERC ¶ 61,080 (1996); see Order No. 889, *Open Access Same-Time Information System (formerly Real-Time Information Networks) and Standards of Conduct*, 75 FERC ¶ 61,078 (1996); see Order No. 2000, *Regional Transmission Organization*, 89 FERC ¶ 61,285 (1999).

8. *Electric Power Markets*, FERC, <https://ferc.gov/electric-power-markets> (last visited Oct. 28, 2023).

9. Order No. 888, *supra* note 7, at P 1.

10. *Id.*; Order No. 889, *supra* note 7, at i.

11. Order No. 888, *supra* note 7, at 1, P 279.

12. *Id.* at 279-86.

13. Order No. 889, *supra* note 7, at P 1; Kenneth Rose et al., *Research report: Summary of key state issues of FERC orders 888 and 889*, NRRI 51-52 (Jan. 1997), <https://www.osti.gov/biblio/464146>.

14. See generally Order No. 2000, *supra* note 7.

15. *Id.* at P 1.

16. *Id.* at PP 1, 4-5.

17. *Id.* at P 152.

18. Order No. 2000, *supra* note 7, at P 324.

19. *Id.* at P 393.

20. Seth Blumsack, *EME 801 Energy Markets, Policy, and Regulation: Regional Transmission Organizations*, PENN. STATE UNIV. <https://www.e-education.psu.edu/eme801/node/692> (last visited Nov. 1, 2023).

Although FERC did not mandate formation of ISOs or RTOs,²¹ there has been significant uptake. Today, there are seven RTOs and ISOs that serve approximately two-thirds of electricity customers in the United States.²² Each RTO and ISO has a unique structure, but there are many similarities among them.²³ Each RTO or ISO serves to: manage bulk power transport; provide non-discriminatory access to transmission infrastructure; dispatch electricity generation to balance supply and demand in real time; plan for generation and transmission; and run markets for electricity generation.²⁴ Decisions are generally made by a board and informed by committees comprised of stakeholders.²⁵

In part due to their roles in long-term planning and as gatekeepers to the electric grid, RTO and ISO decision-making has been the subject of increasing focus. RTOs and ISOs have considerable authority to influence which technologies are connected to the electric grid.²⁶ Given the RTOs' and ISOs' mandate to ensure grid reliability and the composition of their voting membership, which includes vertically-integrated utilities and large owners of transmission lines, they have been perceived by some as developing rules and practices that have, directly or indirectly, advantaged legacy electric generation systems over newer technologies such as wind or solar.²⁷ In the eyes of those commentators, RTOs' and ISOs' perceived preference for fossil fuel systems has created tension with broader social efforts to combat climate change by reducing carbon emissions from fossil fuel combustion.²⁸ Indeed, longstanding concerns about RTO/ISO governance have taken on greater importance in light of tensions between legacy generation systems and renewables, particularly with respect to which parties are permitted to participate in decision-making and what role the public interest has in influencing RTO/ISO decisions.

III. RTO AND ISO STAKEHOLDER RESPONSIVENESS

In its initial orders sanctioning the formation of ISOs and RTOs, FERC took a light-handed approach to mandates about organization governance. FERC intended for its Order No. 2000 “to be neutral as to organizational form.”²⁹ But it did include minimum characteristics and minimum functions of an RTO that bear on RTO governance.³⁰ Order No. 2000 described an “independence” principle that required that RTOs be designed to have “a decision-making process that is

21. Kate Konschnik, *RTOGov: Exploring Links Between Market Decision-Making Processes and Outcomes*, Duke Nicholas Inst. Env't Pol'y Sols. 2 (Sept. 2019), https://nicholasinstitute.duke.edu/sites/default/files/publications/RTOGov_Exploring_Links_Final.pdf.

22. *Power Market Structure*, EPA, <https://www.epa.gov/green-power-markets/power-market-structure> (last visited Oct. 28, 2023).

23. Blumsack, *supra* note 20.

24. *Id.*

25. *Id.*

26. Shelly Welton, *Rethinking Grid Governance for the Climate Change Era*, CALIF. L. REV. 209, 230-32 (2021).

27. *Id.* at 241-52.

28. *Id.* at 238-40.

29. Order No. 2000, *supra* note 7, at P 125.

30. *Id.* at PP 1, 4-5.

independent of control by any market participant or class of participants,”³¹ and FERC defined the term “market participant.”³² Order No. 2000 also required that RTOs have operational authority for transmission facilities and for security coordination, but even there, FERC expressly avoided being overly prescriptive in order to “allow RTOs flexibility.”³³

As RTOs matured, both FERC and the literature started to pay more attention to RTO governance. FERC proposed a new rulemaking in July 2007 that would (and ultimately did), among other things, address RTOs’ relationships with their stakeholders.³⁴ Shortly thereafter, Professors Dworkin and Goldwasser published their article exploring questions of accountability in RTO governance.³⁵ In that piece, Dworkin and Goldwasser argued that FERC had relied too much on market forces to create “just and reasonable” rates.³⁶ They posited that FERC overlooked several factors in providing for RTOs originally, as well as within its then-pending notice of proposed rulemaking.³⁷ Among them, Dworkin and Goldwasser advocated for greater consideration of the public interest in RTO decision-making, in addition to the interests of the stakeholders as defined in FERC regulations.³⁸

Dworkin and Goldwasser described the many functions of RTOs and explained why accountability within the RTO grid governance system was both important and difficult to achieve.³⁹ The numerous stakeholders with interest in RTO operations – FERC, market participants, states, and the public at large – are all impacted by RTOs, and they can all claim, to a greater or lesser extent, that the RTO either is or should be accountable to them.⁴⁰ These competing interests require RTOs to balance the pressures of different groups that have varying levels of authority over RTO actions.⁴¹ Accountability is further complicated by RTOs’ status as non-profit organizations.⁴² As non-profits, RTOs cannot be made financially responsible for the results of their actions, the costs of which are ultimately borne by market participants and end-users.⁴³

In 2008, FERC finalized its proposed rule under Order No. 719 in an effort to “improve the operation of wholesale electric markets.”⁴⁴ Order No. 719 included provisions involving a number of RTO functions, including market pricing, long-term power contracting, and market monitoring, but it notably included provisions related to the “responsiveness of [RTOs] and [ISOs] to their customers and

31. *Id.* at P 194.

32. *Id.* at P 195.

33. Order No. 2000, *supra* note 7, at PP 277-78.

34. Notice of Proposed Rulemaking, *Wholesale Competition in Regions with Organized Electric Markets*, 72 Fed. Reg., 36,276 (2007).

35. Dworkin, *supra* note 2.

36. *Id.* at 545-46.

37. *Id.*

38. *Id.* at 546.

39. Dworkin, *supra* note 2, at 578-91.

40. *Id.* at 578-79.

41. *Id.* at 579-80.

42. *Today in Energy*, EIA (Apr. 4, 2011), <https://www.eia.gov/todayinenergy/detail.php?id=790>.

43. Dworkin, *supra* note 2, at 580-81.

44. Order No. 719, *supra* note 6, at P 1.

other stakeholders, and ultimately to the consumers who benefit from and pay for electricity services.”⁴⁵ Recognizing that “[n]either Order No. 888 nor Order No. 2000 mandated specific RTO board governance requirements,” FERC sought to address stakeholders’ concerns that RTOs and ISOs were not responsive enough to stakeholders and electric customers.⁴⁶ To that end, FERC required each RTO to submit a compliance filing demonstrating practices it had in place to ensure responsiveness to stakeholders.⁴⁷ FERC explained that it intended to assess those filings on four criteria: inclusiveness, fairness in balancing diverse interests, representation of minority positions, and ongoing responsiveness.⁴⁸ These criteria speak to some of the accountability concerns that Dworkin and Goldwasser identified, and if energetically implemented, could have improved RTO governance.⁴⁹

In response to Order No. 719, each of the six interstate RTOs/ISOs submitted a compliance report to FERC.⁵⁰ While some RTOs/ISOs proposed making small changes to enhance their responsiveness to shareholders,⁵¹ each of the RTOs/ISOs asserted that their existing processes and protocols either largely or entirely complied with the responsiveness requirements of Order No. 719.⁵²

45. *Id.*

46. *Id.* at PP 248-49.

47. *Id.* at PP 250, 261.

48. Order No. 719, *supra* note 6, at PP 251, 262-64.

49. Dworkin, *supra* note 2, at 578-600.

50. *California Independent System Operator Corporation Compliance Filing*, FERC Docket No. ER09-1048 (Apr. 28, 2009) [hereinafter *CAISO Compliance Filing*]; *Midwest Independent Transmission System Operator, Inc., Compliance Filing*, FERC Docket No. ER09-1049 (Apr. 28, 2009) [hereinafter *MISO Compliance Filing*]; *Southwest Power Pool, Inc., Compliance Filing*, FERC Docket No. ER09-1050 (Apr. 28, 2009) [hereinafter *SPP Compliance Filing*]; *ISO New England Inc. Compliance Filing*, FERC Docket No. ER09-1051 (Apr. 28, 2009) [hereinafter *ISO-NE Compliance Filing*]; *PJM Interconnection, L.L.C., Compliance Filing*, FERC Docket No. ER09-1063 (Apr. 29, 2009) [hereinafter *PJM Compliance Filing*]; *New York Independent System Operator, Inc., Compliance Filing*, FERC Docket No. ER09-1142 (May 15, 2009) [hereinafter *NYISO Compliance Filing*].

51. *CAISO Compliance Filing*, *supra* note 50, at 8-10 (discussing goal of improved management of stakeholder comments and establishment of a Stakeholder Symposium); *MISO Compliance Filing*, *supra* note 50, at PP 42-43 (discussing a commitment to formally include minority positions in Advisory Committee minutes); *ISO-NE Compliance Filing*, *supra* note 50, at 112-13 (proposing to post committee meeting agendas and clarify that stakeholders may submit written materials to the Board or any committee); *id.* at 116 (committing to provide stakeholders more information with which to evaluate the implications of ISO-NE’s activities); *NYISO Compliance Filing*, *supra* note 50, at 36 (noting that, going forward, NYISO staff will be required to communicate minority positions to the Board in their briefing materials).

52. *See CAISO Compliance Filing*, *supra* note 50, at 2 (“The existing governance practices and procedures of CAISO provide the most direct solution to the Commission’s concerns. . . .”); *MISO Compliance Filing*, *supra* note 50, at 5 (“The Midwest ISO believes that its current stakeholder representation structure and processes generally comply with the responsiveness requirements of Order No. 719.”); *SPP Compliance Filing*, *supra* note 50, at 35-42 (stating, in response to each of FERC’s four Order No. 719 responsiveness criteria, that SPP’s existing processes were adequate); *ISO-NE Compliance Filing*, *supra* note 50, at 99 (“While . . . ISO-NE proposes herein to enhance its existing responsiveness practices, it is ISO-NE’s belief that as of the date of this filing it is in compliance with the Commission’s requirements for responsiveness.”); *PJM Compliance Filing*, *supra* note 50, at 51 (“PJM’s stakeholder process satisfies the four responsiveness criteria.”); *NYISO Compliance Filing*, *supra* note 50, at 34 (“[T]he NYISO believes that its existing shared governance arrangements more than satisfy Order No. 719’s requirements and is proposing no modifications to them in this compliance filing.”)

Perhaps in response to significant public interest, FERC bifurcated its review of the portion of RTOs'/ISOs' compliance filings addressing governance⁵³ and scheduled a joint technical conference on February 4, 2010.⁵⁴ The technical conference was intended "to provide an additional forum for interested parties to discuss issues related to . . . RTO/ISO responsiveness issues concerning all RTOs and ISOs."⁵⁵ Among the topics considered were comments from the National Association of State Utility Consumer Advocates, which argued in favor of reorganizing the RTO/ISO stakeholder process and governance structure because of the current system's barriers to participation by end-use customers.⁵⁶

Several months following the technical conference, FERC issued orders accepting all six RTOs'/ISOs' compliance filings on the same day.⁵⁷ Although in each order, FERC acknowledged that "many of the additional ideas presented and proposals made in this proceeding, and in response to the February 4, 2010, technical conference . . . deserve consideration in stakeholder processes as RTOs and ISOs continue to evolve and improve,"⁵⁸ the Commission did not require any of the RTOs/ISOs to make any changes to their processes. Instead, it simply admonished the RTOs/ISOs that they should continue to consider ways to improve their governance and stakeholder policies and that if unaddressed concerns persist, the Commission "may revisit these issues," taking "appropriate action, as required."⁵⁹

A review of recent literature reveals that compliance with Order No. 719 did not eliminate all criticisms of the representativeness of RTO governance and that concerns about RTO/ISO governance do, in fact, persist.

IV. LITERATURE REVIEW OF PROPOSED CHANGES TO RTO PARTICIPATION MODELS

Since Dworkin and Goldwasser first called attention to concerns about RTO governance, several commentators have provided their own critiques and proposals for modernizing RTO operations and enhancing RTOs' accountability to stakeholders.

53. See, e.g., Order on Compliance Filing, *PJM Interconnection, L.L.C.*, 129 FERC ¶ 61,250, FERC Docket No. ER09-1063, ¶ 19 (Dec. 18, 2009) ("This order makes no findings as to PJM's compliance with the fourth area of reforms identified in Order No. 719: the responsiveness of RTOs and ISOs to their customers and other stakeholders. . . . [T]he Commission will issue a separate order addressing PJM's compliance with this aspect of Order 719.")

54. Order Accepting Compliance Filing, *PJM Interconnection LLC*, 133 FERC ¶ 61,071 at PP 22-23 (2010).

55. *Id.*

56. *Id.* at P 23 n.19.

57. *Id.*; Order Accepting Compliance Filing, *Midwest Independent Transmission System Operator, Inc.*, 133 FERC ¶ 61,068 (2010); Order Accepting Compliance Filing, *Southwest Power Pool Inc.*, 133 FERC ¶ 61,069 (2010); Order Accepting Compliance Filing, *ISO New England Inc. and New England Power Pool*, 133 FERC ¶ 61,070 (2010); Order Accepting Compliance Filing, *New York Independent System Operator Inc.*, 133 FERC ¶ 61,072 (2010).

58. Order Accepting Compliance Filing, *California Independent System Operator Corporation*, 133 FERC ¶ 61,067 at P 40 (2010).

59. *Id.* at P 43.

Stephanie Lenhart, from the Boise State University Energy Policy Institute/Center for Advanced Energy Studies, and Dalten Fox, from Boise State University's School of Public Service, performed a review of the seven existing RTOs and ISOs, focusing on governance structures and participatory and power dimensions.⁶⁰ Lenhart and Fox performed a qualitative comparative case study, focusing on the breadth of actors involved, communication and collective decision-making approaches, and the participants' shared authority.⁶¹ Within current RTO structures, they identified a number of commonalities, including decision-making boards, stakeholder membership, and some interaction with non-governmental organizations and state agencies.⁶² They also described and compared the governance structures of various RTOs.⁶³ After their review, Lenhart and Fox concluded that existing sector designations (e.g., transmission, generation, etc.) used to apportion authority within RTOs may be outdated and ripe for update by replacing the existing sectors with smaller and more numerous sectors to create more homogenous groupings that can more efficiently represent stakeholder interests.⁶⁴ They also suggested that governance structures promoting open access, information sharing, and stakeholder dialogue could be valuable going forward.⁶⁵ Further, Lenhart and Fox proposed focusing more attention on interactions between stakeholders and RTO staff, and improving institutional relationships with state authorities.⁶⁶

Two additional governance principles were the focus of a study by Christina Simeone, a Senior Fellow at the University of Pennsylvania's Kleinman Center for Energy Policy and a PhD candidate in a joint program between the Colorado School of Mines and the National Renewable Energy Laboratory. Simeone discusses the changes in circumstances, including in electricity markets and state policy, that have occurred since FERC last updated its standards for RTO/ISO governance with Order No. 719 of 2008 and identified examples of governance problems within PJM.⁶⁷ To address those problems, she proposed creating two new governance principles for RTO: a fair representation principle and a neutrality principle.⁶⁸ Simeone argues that these principles are based on language previously espoused by FERC and would lead to a better reflection of stakeholder diversity and more neutral market rules.⁶⁹ According to Simeone, the fair representation principle would ensure that RTO/ISO sectors reflect the full diversity of stakeholders and that states have a "strong and clearly defined role" in the governance

60. Stephanie Lenhart & Dalten Fox, *Participatory Democracy in Dynamic Contexts: A Review of Regional Transmission Organization Governance in the United States*, 83 ENERGY RSCH. SOC. SCI. 1 (2022).

61. *Id.* at 5.

62. *Id.* at 6-7.

63. *Id.* at 7-10.

64. Lenhart, *supra* note 60, at 11.

65. *Id.*

66. *Id.*

67. Christina E. Simeone, *Reforming FERC's RTO/ISO Stakeholder Governance Principles*, 34 ELECTRICITY J. 2-8 (2021).

68. *Id.* at 10-11.

69. *Id.*

process.⁷⁰ The neutrality principle also encompasses the idea of increased public transparency, allowing for broader distribution of substantive information about governance deliberations and voting outcomes.⁷¹

A number of commentators have critiqued RTO governance related to RTOs' ability to address climate change by guiding the transition to a clean energy economy. Shelley Welton, Assistant Professor at the South Carolina School of Law, describes RTOs as being "private industry clubs"⁷² that are preventing a timely transition away from fossil fuels in the energy industry.⁷³ Welton argues that RTOs' failures to address public policy challenges can be partially attributed to the fact that they arose out of a deregulatory environment, which led to what she describes as "functionally privatized governance systems."⁷⁴ Because RTO responsibilities have expanded over time, these largely privatized RTOs are effectively being required to manage matters of public policy that they were never intended to address.⁷⁵ Emphasizing the importance of reducing carbon emissions to combat climate change, Welton proposes several potential changes to RTO structures designed to reduce the control that legacy fossil fuel interests have over RTO decision-making. First, she suggests paring back RTO authority and returning them to a more basic function, primarily by eliminating mandatory capacity markets as an RTO function.⁷⁶ Welton further proposes increasing regulatory oversight over RTOs by both FERC and state regulatory agencies⁷⁷ and argues for more energetic policing of corporate power within RTOs and the electric system generally by, among other things, more heavily scrutinizing mergers.⁷⁸ Alternatively, she raises the possibility of a complete rethinking of grid management with what she calls a "public option," which would mean replacing RTOs with a government agency dedicated to managing the grid and performing the functions that RTOs currently manage.⁷⁹

Daniel Walters, Associate Professor of Law at Texas A&M University School of Law, and Andrew N. Kleit, Professor of Energy and Environmental Economics at Penn State University, similarly identified shortcomings in RTOs' ability to address climate change that they contend arose out of changed management priorities over time. Walters and Kleit posit that RTOs were created as corporatist organizations in an era where reliability and affordability were the two primary foci of grid management.⁸⁰ With the emergence of the "energy trilemma" era, which adds the third factor of decarbonization to reliability and affordability as management goals, Walters and Kleit argue that the corporatist model for RTOs

70. *Id.* at 10.

71. Simeone, *supra* note 67, at 11.

72. Welton, *supra* note 26, at 209.

73. *Id.* at 209-10.

74. *Id.* at 214.

75. *Id.*

76. Welton, *supra* note 26, at 265-67.

77. *Id.* at 267-70.

78. *Id.* at 27-72.

79. *Id.* at 272-74.

80. Daniel Walters & Andrew N. Kleit, *Grid Governance in the Energy Trilemma Era: Remediating the Democracy Deficit*, 74 ALA. L. REV. 1033, 1037 (2022).

is no longer appropriate.⁸¹ Although they recognize the benefits of corporatist governance under certain conditions,⁸² they argue that corporatism is not adequate for RTO governance in the energy trilemma era.⁸³ They point to imbalances in power due to voting and membership rules⁸⁴ and a lack of public transparency⁸⁵ as two primary weaknesses in RTOs under the corporatist model, and they provide case studies to reflect those deficiencies.⁸⁶ Walters and Kleit propose a more pluralistic form of RTO governance that would be defined by broadened access to RTO proceedings, including notice-and-comment requirements and information-gathering mechanisms;⁸⁷ more transparency of RTO proceedings, including a public-facing dockets system and a more focused proposal system;⁸⁸ and enhanced oversight by both FERC and the judiciary.⁸⁹

As part of a longer piece discussing several aspects of grid reliability, Alexandra Klass, Professor at the University of Minnesota Law School, and her co-authors devote a section to discussing the challenges created by RTO governance as well as suggesting possible solutions.⁹⁰ Klass, et al. note that RTOs can help to advance the goals of both FERC and the states by working through complex technical and social problems to reach compromise, but they suggest RTOs and ISOs currently lack the balance necessary to effectively manage coordinating the priorities of clean energy and grid reliability, especially given that RTOs have no clear statutory mandate to advance renewable energy.⁹¹ The authors identify several examples to illustrate their belief that RTO governance often favors incumbent technologies, which often operate on fossil fuels, at the expense of new technologies, often renewables.⁹² They then suggest several structural reforms that could weaken the hold that incumbent technologies have over RTO decision-making, including increasing transparency, re-evaluating whether RTOs are complying with the responsiveness expectations established in Order No. 719, enhancing state authority in RTO decision-making (potentially through its Section 209 authority to delegate certain matters to committees of states), and implementing legislative fixes.⁹³

In a more positive vein, other researchers have analyzed how RTOs have changed institutionally in response to increasing pressure to integrate renewables into the electric grid. Benjamin A. Stafford, with the University of Minnesota's Carlson School of Management, and Elizabeth J. Wilson, from the University of Minnesota's Humphrey School of Public Affairs, explore the decision-making

81. *Id.*

82. *Id.* at 1053-55.

83. *Id.* at 1063.

84. Walters, *supra* note 80, at 1063-67.

85. *Id.* at 1067-68.

86. *Id.* at 1068-75.

87. *Id.* at 1077-79.

88. Walters, *supra* note 80, at 1079-82.

89. *Id.* at 1082-83.

90. Alexandra Klass et al., *Grid Reliability Through Clean Energy*, 74 STAN. L. REV. 969 (2022).

91. *Id.* at 1058-60.

92. *Id.* at 1060-62.

93. *Id.* at 1068-70.

processes that have led to wider penetration of wind energy into the Midcontinent Independent System Operator (MISO) grid.⁹⁴ They applied a multi-method approach to the strategic action field theory to analyze how changes in MISO's policy came about to allow for increased wind generation.⁹⁵ Stafford and Watson determined that MISO had to "re-negotiate complex socio-technical systems" and fundamentally change the system's operation in order to incorporate more wind energy into the grid.⁹⁶ They posit that an RTO's ability to engage and coordinate policymakers and stakeholders is an important element of adapting to changing policy and technology.⁹⁷ They further suggest that RTOs may fit well into the concept of "boundary organizations" that coordinate complex science and policy.⁹⁸

Stephanie Lenhart, Assistant Research Professor in Boise State University's Department of Public Policy and Administration, et al., further developed the concept of RTOs/ISOs as boundary organizations in their study of a different challenge that resulted from integrating renewable energy sources into the electricity grid. The authors examined the California Independent System Operator's (CAISO's) initiative to provide energy imbalance market (EIM) services to authorities throughout the Western Interconnection, even those outside of CAISO itself, to assist with the integration of variable generation resources like wind and solar.⁹⁹ Lenhart, et al. analyzed the group of stakeholders convened to implement the EIM services as a boundary organization where there is overlap between technical and policy considerations and tensions between stakeholders are negotiated.¹⁰⁰ They determined that discursive processes to help create a collective identity among participants was instrumental in helping the group achieve a desirable outcome.¹⁰¹

Hannah J. Wiseman, Professor of Law at Penn State Law School, analyzed RTOs in the context of cooperative federalism and observed that their current governance structure offers both advantages and disadvantages for policymaking.¹⁰² Wiseman found that, under the right circumstances, a regional actor situated between federal and state governments allows for policy experimentation that can lead to more innovation than would be expected from federal or state governments alone.¹⁰³ She notes that, in some cases, RTOs have been able to successfully ex-

94. Benjamin A. Stafford & Elizabeth J. Wilson, *Winds of change in energy systems: Policy implementation, technology deployment, and regional transmission organizations*, 21 ENERGY RSCH. SOC. SCI. 222 (2016).

95. *Id.* at 226-33.

96. *Id.* at 222, 233.

97. *Id.* at 234.

98. Stafford, *supra* note 94, at 234.

99. Stephanie Lenhart et al., *Electricity governance and the Western energy imbalance market in the United States: The necessity of interorganizational collaboration*, 19 ENERGY RSCH. SOC. SCI. 94 (2016).

100. *Id.* at 95.

101. *Id.* at 105.

102. Hannah J. Wiseman, *Regional Cooperative Federalism and the US Electric Grid*, 90 GEO. WASH. L. REV. 147 (2022).

103. *Id.* at 153.

pand transmission infrastructure to support more renewable generation and maintain service during extreme weather events.¹⁰⁴ But she also recognized that challenges of coordination remain – including in the context of trying to expand renewable energy generation¹⁰⁵ and to construct interregional transmission lines.¹⁰⁶ Wiseman observed that RTOs specifically have often come up short with respect to accountability, in part because they are private corporations that can disregard certain important viewpoints and operate with limited agency oversight.¹⁰⁷ To overcome some of these shortcomings, Wiseman proposed that: (1) FERC issue mandates to incentivize innovation,¹⁰⁸ (2) RTOs extend governance services to non-members,¹⁰⁹ and (3) RTOs improve accountability by expanding public participation and developing better tools for resolving intra-RTO conflicts.¹¹⁰

V. DISCUSSION

The body of literature that has been generated since Dworkin and Goldwasser's 2007 study of RTO governance reveals that the concerns they raised about RTO operations are widely shared and that those concerns have not been fully mitigated by the implementation of FERC Order No. 719. Indeed, as focus on climate change has intensified in recent years, it appears that RTOs' and ISOs' perceived performance in combatting climate change may have exacerbated some concerns about RTO governance. That does not mean, however, that commenters are necessarily ready to give up on RTOs or ISOs altogether. The literature suggests that there are benefits to RTOs, and much of the commentary focuses on ways of improving RTOs' and ISOs' functions to better focus on protecting the public interest and achieving climate goals.

The successes of RTOs and ISOs identified in the literature reveal a form of governance that has distinct advantages. Most notably, by bringing together multiple stakeholders with varying interests and expertise, RTOs and ISOs have the

104. *Id.* at 236.

105. *Id.* at 154.

106. Wiseman, *supra* note 102, at 184.

107. *Id.* at 155-56.

108. *Id.* at 215-16.

109. *Id.* at 216-17.

110. Wiseman, *supra* note 102, at 217-19; In separate student notes, Deandra Fike and Oleg Kozel both argue that current management of the energy grid is hindering progress toward addressing climate change. Fike writes that RTOs focus too much on protecting established energy interests and that reforms are needed to promote the public interest and advance the battle against climate change. Deandra Fike, Note, *Regional Electricity Markets and the Struggle to Integrate State Clean Energy Subsidies*, 46 COLUM. J. ENV'T L. 523 (2021). She favors expanding states' roles in RTO governance. *Id.* at 559. She further advises that RTOs that currently do not have mandatory capacity markets be cautious about forming them and advocates for FERC to be more cognizant of the benefits of clean energy technology when reviewing and approving RTO rule proposals. *Id.* at 559-62. Kozel argues that green energy policies are being "sabotaged" by RTOs. Oleg Kozel, Note, *Governing the Grid: Reforming Regional Transmission Organizations of the Heels of Order No. 841*, 49 ECOLOGY L.Q. 259, 261 (2022). Kozel contends that RTOs suffer from regulatory capture that results in legacy interests having the ability to prevent integration of alternative forms of energy. *Id.* Kozel proposes remedying that regulatory capture by increasing insulation of RTO boards from their members, distributing alternative resource stakeholders broadly among sectors, and deferring to states on a case-by-case basis. *Id.* at 288-92.

potential to address complex problems that have technical, policy, and legal dimensions.¹¹¹ By addressing problems on a regional scale, RTOs and ISOs have a unique ability to experiment and innovate, leading to emergent policy solutions.¹¹² These innovations are most likely to occur when RTOs effectively engage and coordinate policymakers and stakeholders¹¹³ and develop processes that allow for the group to create a collective identity.¹¹⁴ In fact, there have been success stories. MISO and Southwest Power Pool (SPP) have led the way in developing transmission infrastructure across state lines to support burgeoning renewable energy production,¹¹⁵ and CAISO partnered with non-members to establish an energy imbalance market that helped address another challenge of renewable generation.¹¹⁶ Indeed, Western states — which will host much of the burgeoning solar production and some new wind generation — may join either CAISO’s energy imbalance market or SPP’s new energy market to help integrate renewable energy generation, among other benefits.

But these successes do not tell the whole story of RTOs and ISOs, which continue to have considerable room for improvement. The literature cited in this article points to a number of deficiencies in the RTO governance process. These organizations are regularly criticized for their inability — or unwillingness — to more effectively integrate renewable energy resources into the electric grid.¹¹⁷ They are also viewed as lacking transparency,¹¹⁸ inadequately accounting for the public interest in their decision-making,¹¹⁹ and having numerous other deficiencies that undermine their ability to optimally serve the public.

These critiques suggest that the time may have come for FERC to follow through on the warning it made when it approved RTOs’ and ISOs’ Order No. 719 compliance filings — to “revisit” stakeholder responsiveness concerns and take “appropriate action, as required.”¹²⁰ It is clear that the electricity industry has changed significantly since FERC issued Order No. 719 in 2008— and even more so since RTOs and ISOs were originally contemplated prior to the turn of the century. And with the effects of climate change becoming ever clearer and the government investment in renewable energy sources growing significantly under the Inflation Reduction Act, it would seem that those changes are likely to accelerate in the coming years. The ability of RTOs and ISOs to adapt and respond in a way that facilitates — rather than hinders — the fight against climate change may depend on their willingness to adapt their governance models.

There are a number of changes that FERC may consider to address the shortcomings identified by critics. Several themes emerge from the literature presented

111. Stafford, *supra* note 94, at 222, 233.

112. Wiseman, *supra* note 102, at 153.

113. Stafford, *supra* note 94, at 234.

114. Lenhart et al., *supra* note 99, at 105.

115. Wiseman, *supra* note 102, at 177.

116. Lenhart et al., *supra* note 99, at 95.

117. See generally Welton, *supra* note 26; Walters, *supra* note 80, at 1037; Fike, *supra* note 110, at 561-62; Kozel, *supra* note 110, at 261.

118. Walters, *supra* note 80, at 1067; Lenhart, *supra* note 60, at 11; Simeone, *supra* note 67, at 8.

119. Dworkin, *supra* note 2, at 546; Fike, *supra* note 110.

120. 133 FERC ¶ 61,067, at P 43.

here. There are calls for RTOs and ISOs to embrace transparency,¹²¹ provide for more representative governance practices,¹²² and be subject to more exacting oversight,¹²³ among other things. FERC can use these academic critiques as a menu of options for requirements it can impose to improve the governance of RTOs and ISOs. Given the urgency of the battle against a changing climate, it seems that FERC should prioritize those governance changes that would prevent calcification of the electricity market in a way that would impede the emergence of new entrants. FERC may also consider prioritizing imposing requirements that ensure that public interest groups and consumer advocates have both the right to become members or RTOs and ISOs and the practical ability to meaningfully contribute. These types of interventions are generally consistent with requirements that FERC has imposed in the past under its authority from section 205 of the Federal Power Act to ensure that rates and charges for transmission or sale of electric energy are “just and reasonable.”¹²⁴ If FERC is reluctant to assert its existing authority over just and reasonable rates to make changes geared toward addressing the climate crisis, Congress should consider statutorily mandating FERC to consider climate impacts in its role overseeing electric markets.

To inform future government action – whether by FERC or Congress – future academic literature should focus on feasible ways to operationalize some of the transparency and accountability principles discussed by many authors within the complex political and economic environment in which FERC operates. It may also focus on discrete and specific steps that FERC could take under its existing authority to mitigate climate change.¹²⁵ Finally, if some of these issues are not resolved soon, it may be worth exploring the types of changes Congress can make at the statutory level to force change on a time scale consistent with addressing meaningfully addressing climate change.

VI. CONCLUSION

This review suggests that RTOs and ISOs are likely to continue to play an important role in our energy future. By building on the positive aspects of the current model and incorporating some of the, admittedly significant, changes suggested in the literature, the organizations will be better positioned to take on the heavy challenges of our time – most notably the battle against climate change – and achieve their full potential. The literature reviewed in this piece suggests both broad thematic approaches that FERC and/or RTOs and ISOs may consider as well as more specific, targeted proposals for change. Considering those suggestions in the context of both the political and economic space in which FERC and RTOs/ISOs operate as well as the moral imperative to address climate change on a realistic timescale is going to be essential to developing practical and workable solutions. In doing so, the vision for better governance set forth by Dworkin and

121. Lenhart, *supra* note 60, at 11; Simeone, *supra* note 67, at 11; Walters, *supra* note 80, at 1077-82; Wiseman, *supra* note 102, at 217-19.

122. Lenhart, *supra* note 60, at 11; Simeone, *supra* note 67, at 10-11; Kozel, *supra* note 288-92.

123. Walters, *supra* note 80, at 1082-83; Welton, *supra* note 26, at 267-70; Fike, *supra* note 110, at 559.

124. Federal Power Act § 205, 16 U.S.C. § 824d.

125. Klass, *supra* note 90, at 1068-70.

Goldwasser – and hinted at in some of the Order No. 719 proceedings – may finally become a reality.

COALITION STABILITY IN PJM: EXPLORING THE CONSEQUENCES OF STATE DEFECTION FROM THE WHOLESALE MARKET

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Synopsis: Using an electricity market simulation tool, we investigate the impacts of a U.S. state defecting from the PJM wholesale electricity market on the states that remain in the coalition. Generally, we find that the defection of a net electricity buyer increases the welfare of the remaining consumers and decreases the welfare of the remaining producers. If a net seller defects from the market, the opposite effect holds. Furthermore, the changes in generation caused by a state defection cause changes in emissions in the remaining states, affecting the ability of the remaining states to meet their climate incentives. However, the magnitude of these changes depends on the generation mix of each individual state. Our simulations suggest that, for state legislatures pursuing climate goals, the best strategy to adopt is to pass laws that are both geographically targeted and flexible. State and federal policymakers should also recognize the importance of an RTO’s network effect on the achievement of state emission goals.

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I. INTRODUCTION

Since the late 1990s, organized electricity markets in the United States have shown that a geographically broad and resource-diverse power grid can achieve efficiency and reliability improvements in electric power generation. PJM, a Regional Transmission Organization (RTO) in the eastern U.S., has become the largest organized electricity market in the western hemisphere (Figure 1). Although this large interconnected system offers important advantages, it also raises the possibility of conflict between the incentives of the various investor-owned utilities that are members of the coalition. If achieving the political and economic goals of an individual state is made difficult by RTO rules, its regulated utilities may leave the organization. This paper explores the impacts of a state’s electric utilities and power producers leaving the wholesale electricity market of an RTO. Using an electricity market simulation tool, we model the operations of the remaining wholesale market under various state exit scenarios. Our analysis identifies the economic and emissions effects of state defection on the remaining electricity suppliers and consumers in the coalition.

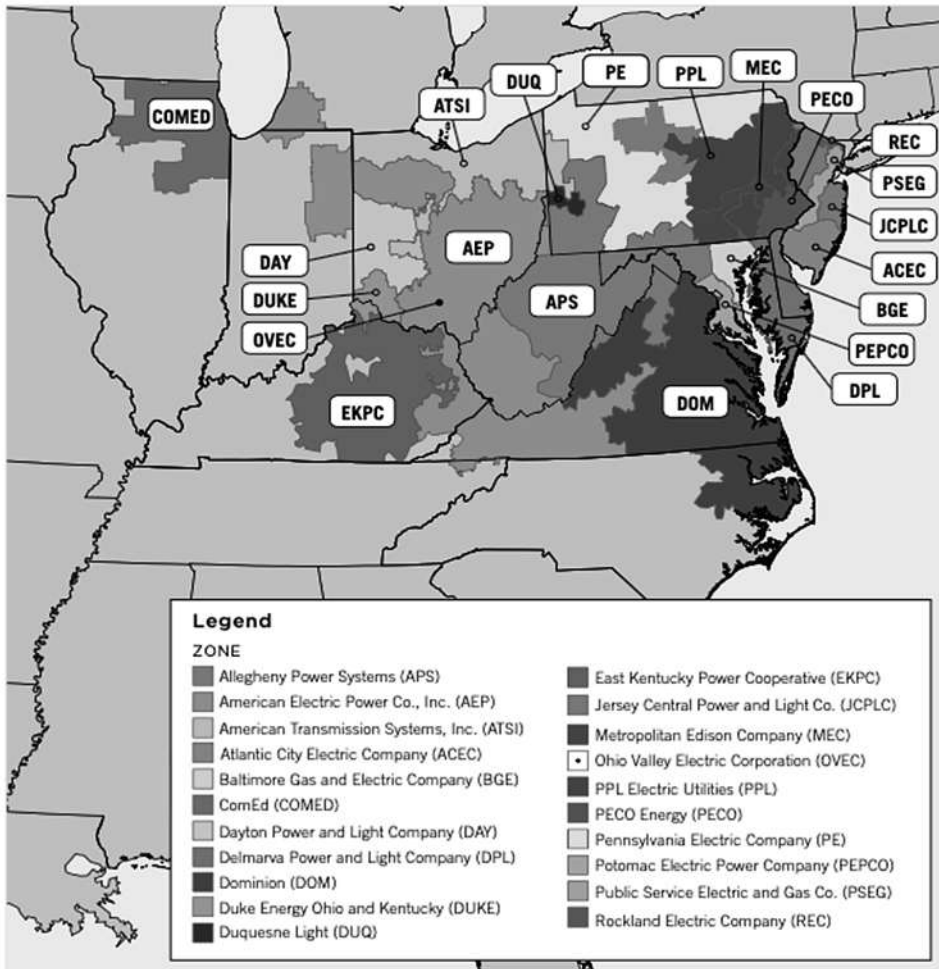


Figure 1: PJM Transmission zones.¹

The notion of a state defecting from an RTO is not contrived. Recent proposed Minimum Offer Price Rule (MOPR) changes have caused states such as Maryland and New Jersey to threaten to withdraw from PJM’s capacity market.^{2 3} Their arguments for leaving focus on discrepancies between the states’ pursuits to

1. Travis E. Dauwalter, et al., *Coalition Stability in PJM: Exploring the Consequences of State Defection from the Wholesale Market* 1-38, 12 (Nicholas Inst. for Energy, Env’t & Sustainability, Duke Univ., Working Paper, NI WP 22-02) (Nov. 2022), <https://nicholasinstitute.duke.edu/publications/coalition-stability-pjm-exploring-consequences-state-defection-wholesale-market>; PJM, *PJM Transmission Zones*, <https://www.pjm.com/library/~media/about-pjm/pjm-zones.ashx> (last visited Oct. 8, 2023).

2. Catherine Morehouse, *Maryland taking a “serious look” at exiting PJM capacity market through FRR*, says PSC Chair, UTIL. DIVE, (Apr. 29, 2020), <https://www.utilitydive.com/news/maryland-taking-a-serious-look-at-exiting-pjm-through-frr-says-psc-chair/576957/>.

3. Robert Walton, *New Jersey looks to exit PJM capacity market, worried MOPR will impede 100% carbon-free goals*, UTIL. DIVE, (Mar. 31, 2020), <https://www.utilitydive.com/news/new-jersey-looks-to-exit-pjm-capacity-market-worried-the-mopr-will-impede/575160/>.

achieve net-zero carbon goals and regulatory actions from federal agencies, namely the Federal Energy Regulatory Commission (FERC). The discordance between state policy goals and federal market oversight in an RTO highlights the complex interactions between various stakeholders in the electricity sector. Our analysis considers the idea that a state may, as a matter of sovereignty, remove its electric utilities and power producers from an RTO market, thus causing spillover effects on the welfare of the remaining states.

We explore the defection of a state's utilities and power producers from the RTO's wholesale energy market as a means to simulate the potential (in)stability of the RTO network coalition to the departure of several members. We examine cases in which a state's utilities and power producers would cease to supply or purchase any electricity in PJM's real time market due to its defection. This is a somewhat extreme interpretation of what defection could mean – individual utilities could remain in the electricity market and only leave the capacity market or could leave the electricity market but engage in bilateral transactions with other PJM market participants. Also, the state's Independent Power Producers (IPPs) could continue selling in to PJM's markets. Determining which utilities would do what after their state's defection is an interesting question, but beyond the scope of this article. Instead, we focus on the distributional effects of the removal of all of a state's current electricity purchases and sales into PJM on prices, profits, generation, and emissions across the states that remain in the RTO to get a sense of the magnitude and geographic pattern of these spillover effects. From this we gain insights into the broader economic and environmental consequences of the simulated actions.

Our research focuses on wholesale market defection, expanding on previous literature that has assessed the impact of defection from a capacity market. Monitoring Analytics, the independent market monitor that oversees PJM, found that the threats by New Jersey and Maryland to leave the PJM capacity market could annually cost those states as much as \$386.4 million and \$206.6 million, respectively.^{4 5} Furthermore, they reported that a defection by either of these states would decrease the market-clearing prices in the remaining PJM capacity market. Intuition suggests that this would make the producers in the remaining states worse off while benefiting the remaining consumers. This study extends these lines of inquiry from PJM's capacity market to its wholesale energy market.

To investigate the implications of state defection from the PJM wholesale market, we simulate the operation of the wholesale market in 2019 under five different state-exit scenarios and compare them to the base case.⁶ Each scenario involves the defection of a different state: New Jersey, Maryland, Virginia, Pennsylvania, and Illinois.⁷ New Jersey and Maryland were selected due to their public

4. *Potential Impacts of the Creation of Maryland FRRs*, MONITORING ANALYTICS, (Apr. 6, 2020), http://www.monitoringanalytics.com/reports/Reports/2020/IMM_Potential_Impacts_of_the_Creation_of_Maryland_FRRs_20200416.pdf.

5. *Potential Impacts of the Creation of New Jersey FRRs*, MONITORING ANALYTICS, (May 13, 2020), http://www.monitoringanalytics.com/reports/Reports/2020/IMM_Potential_Impacts_of_the_Creation_of_New_Jersey_FRRs_20200513.pdf.

6. Dauwalter, *supra* note 1, at 4.

7. *Id.*

comments expressing “distaste for recent developments in PJM’s market rules.”⁸ Virginia was chosen since “it is the largest importer of electricity in PJM.”⁹ Pennsylvania and Illinois were similarly chosen as the two largest net electricity sellers in the market.¹⁰ In general, our findings indicate that when a net buyer state defects, the remaining states’ producers are worse off, and the consumers are better off. The opposite effect occurs when a net seller defects. While this is not surprising, the magnitude of the changes in costs and CO₂ emissions provides insights into the economic and environmental benefits of a large Balancing Authority like PJM. We also explore the impacts of state defection on the remaining states’ ability to pursue their environmental initiatives.

II. METHODS AND DATA

We simulate PJM’s wholesale market hourly operation as it was in 2019 with generator offers, merit order, ancillary services, make-whole payments, and congestion-related effects all playing a role in which generators get dispatched and what price clears in each hour of the year.¹¹

“To measure the impacts of a state defecting from the consortium, we also simulate the removal of a single state from the broader PJM organized market.¹² In those defection scenarios, we simulate PJM without the supply or demand of the defecting state.”¹³

“We use the Electricity Market Simulation Tool (EMST) to simulate the day-ahead market operation outcomes in PJM.”¹⁴ “EMST is a reconfigurable tool that can integrate various unit commitment and dispatch models in different ways to represent various designs in energy and ancillary service markets.”¹⁵ The tool calculates dispatch and financial outcomes for all individual market players including out-of-market uplift payments.¹⁶ EMST was first introduced by Daraeepour et al.¹⁷ to simulate the operation of day-ahead and real-time markets for a year-long period under different market designs that account for the characterization of uncertainty in the day-ahead markets.¹⁸ The tool initially explored load-following capability products, stochastic residual unit commitment, and stochastic market

8. *Id.*

9. *Id.*

10. Dauwalter, *supra* note 1, at 4.

11. *Id.*

12. *Id.*

13. *Id.* at 4. We assume that the utilities and independent power producers from the defecting state do not engage in any bilateral transactions with the remaining PJM members. Therefore, in the simulation we assume that imports and exports from/to other neighboring regions to/from PJM remain constant under all scenarios and are equal to observed hourly 2019 data.

14. Dauwalter, *supra* note 1, at 4.

15. *Id.*

16. Ali Daraeepour, et al., *Economic and environmental implications of different approaches to hedge against wind production uncertainty in two-settlement electricity markets: A PJM case study*, 80 ENERGY ECON. 336 (2019).

17. *Id.* at 342-343.

18. *Id.* at 341-342.

clearing.¹⁹ EMST was later extended to include alternative pricing mechanisms, including primal approximations of convex-hull pricing.²⁰

In this paper, the EMST simulates the day-ahead market operations for each hour of each day and uses its commitment and dispatch outcomes to initialize simulations of the subsequent day. Three models are used to simulate market operations (Figure 2). “First, EMST runs the Unit Commitment Model to determine the generating units’ optimal on/off status and scheduled electrical power output.”²¹ This mixed-integer linear program takes generators’ supply bids along with demand and wind generation forecasts for the next twenty-four hours as inputs to find the schedules that minimize electricity generation costs. The schedules are constrained by the technical characteristics of the power generators such as minimum and maximum power generation limits, ramping capabilities, and minimum up-time and down-time requirements. They are also constrained by the topology of the transmission network. The “second model is a linear program that performs Economic Dispatch, freezing the commitment variables to the optimal values found by the Unit Commitment and determining locational prices for energy and ancillary services.”²² The Economic Dispatch model abides the same technical constraints of the generators and transmission system.²³ After the day-ahead “market-clearing schedules and prices are determined, a third model calculates any out-of-market uplift payments that PJM” makes “to generators to ensure they do not operate at a loss when following the dispatch instructions.”²⁴ The complete formulation of EMST’s three models is available in Dauwalter et al.²⁵ In this paper we do not simulate a Real-Time market where electricity demand or production from variable energy resources is different from the day-ahead forecasts. This would require making assumptions about forecast errors -because the data is not available- and would not affect the comparison of outcomes across scenarios.

19. *Id.* at 343.

20. Ali Daraeepour et al., “*Enhancing Market Incentives for Flexible Performance: Alternative Market Designs to Enhance Market Incentives for Providing Operational Flexibility*” (presenting at the Institute for Operations Research and the Management Sciences (INFORMS) Annual Meeting) (Nov. 8-11, 2020), https://scholar.google.com/citations?view_op=view_citation&hl=en&user=RTEqkHIAAAAJ&citation_for_view=RTEqkHIAAAAJ:YOWf2qJgpHMC.

21. Dauwalter, *supra* note 1, at 4.

22. *Id.*

23. *Id.* at 9.

24. *Id.* at 4.

25. Dauwalter, *supra* note 1, at 7-9.

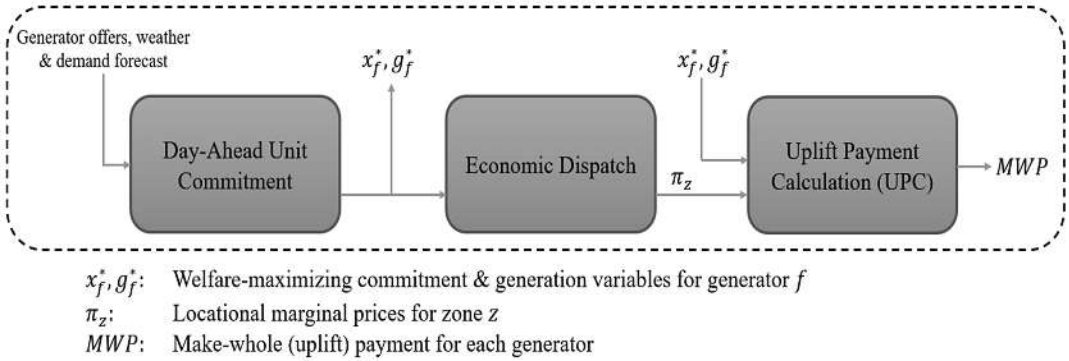


Figure 2: EMST configuration for simulating PJM dispatch outcomes.²⁶

The models require detailed data on PJM's electricity demand, its power generation and energy storage assets, transmission constraints between the modeled PJM zones, and imports/exports between PJM and external grid systems. A full accounting of the data used in this study is available in²⁷ *Appendix A – Data*.

II. RESULTS

A. EMST Performance

To validate the data and modeling approach we compare EMST's base-case simulated prices and generation mix with historical data. The base case represents the actual operations of the PJM wholesale market during the year 2019. Table 1 shows descriptive statistics for all observed locational marginal prices in the PJM market in 2019 compared to EMST's simulated prices during the base case scenario. EMST is able to capture the average movements of the PJM energy market, with the mean and median from EMST being 1.7% and 6.9% higher than in the actual data.²⁸ Prices in real electricity markets are subject to a number of random events that can create large price spikes. These events include unplanned outages on power plants and transmission lines, as well as large errors in forecasts of electricity demand and wind and solar energy output. EMST, like most simulation models, is not able to completely capture these outlier prices.

Time Series	# of Obs	Mean (\$/MWh)	Std Deviation (\$/MWh)	Median (\$/MWh)	Min (\$/MWh)	Max (\$/MWh)	Skewness	Kurtosis
Observed	8,760	25.99	9.26	24.36	8.8	160.36	3	20.74
EMST	8,760	26.43	4.94	26.05	14.23	55.67	0.96	2.03

26. *Id.* at 5.

27. *Id.* at 25.

28. *Id.* at 10.

Table 1: Descriptive statistics of PJM-wide prices in 2019 and EMST simulated prices.²⁹

We also compare PJM’s observed generation mix to EMST’s simulated generation mix in Table 2, and note a few minor differences. EMST simulates higher nuclear generation than what was observed in 2019 because EMST assumes the nuclear generators run at full load for all hours in 2019, not accounting for any turndowns.³⁰ EMST also dispatches more natural gas units and less coal units compared to actual observations.³¹ This is because EMST is designed to select the lowest cost asset, and although it factors in operational reliability constraints “it does not consider broader grid security/reliability concerns” as well as the choices that individual generator owners make to permit their assets to be dispatched based on economics.³² In reality, PJM considers additional factors, occasionally dispatching units out of the merit order, like more expensive coal, trading lower costs for grid reliability. Our simulations do not include these ‘must-run’ conditions, thus opting to always dispatch the least expensive units. The simulated data also showed higher generation from renewables, particularly wind, due to not factoring day-ahead forecast errors nor curtailments that PJM occasionally makes to alleviate transmission congestion.

Fuel Type	% of observed mix	% of simulated mix
Coal	23.72%	17.73%
Gas	36.08%	38.70%
Hydro	1.99%	2.19%
Nuclear	33.64%	37.80%
Oil & Other fuels	1.38%	0.07%
Solar	0.29%	0.36%
Wind	2.90%	3.17%

Table 2: Actual vs simulated PJM generation mix, 2019.³³

Due to limitations in available data between transmission zones, EMST divides PJM into 9 transmission regions, compared to PJM’s twenty-one published transmission zones.³⁴ Hence why the model represents a larger number of available generators in each simulated transmission zone. Nevertheless, the simulated

29. Dauwalter, *supra* note 1, at 10.
 30. *Id.*
 31. *Id.*
 32. *Id.*
 33. Dauwalter, *supra* note 1, at 10.
 34. *PJM Transmission Zones*, *supra* note 1.

well-centered prices, strong correlation, and accurate generation mixes when compared to observed data, speaks to the general quality of the simulation for the purposes of this paper – namely, to assess impacts on overall system performance rather than predicting specific shock events. Thus, we conclude that EMST can provide reliable estimates of PJM’s generator profits, average cost to serve load, and emissions intensity and can be used to measure the impacts of various state defections on these metrics.

B. Impacts of State Defection on Total Generation

After running the base case model, we separately model the defection of five different states from the PJM wholesale market. For each of the five state defection scenarios, PJM’s 2019 market operations were simulated after removing both the electricity supply and demand of the defecting state. New Jersey and Maryland were selected due to threats they have made to exit PJM’s capacity market in response to rule changes that would have made the states’ renewable energy targets more difficult to achieve.^{35 36} An independent market monitor has already conducted analysis on the impacts of these states exiting the capacity market^{37 38} (ref, 2020a and 2020b).³⁹ We extend that analysis by considering the possibility of the state opting to leave the wholesale market altogether, which is not outside the realm of possibility as state objectives come into conflict with market designs.⁴⁰ Our analysis also allows us to evaluate the effects of defection on the remaining states in the PJM wholesale market. Virginia was selected due to its status as the largest net buyer of PJM’s electricity, while Pennsylvania and Illinois were selected as the market’s largest net sellers.⁴¹

An important result of state defection to note is the change in total generation of each state when one state leaves the market. The modeled changes in total generation for each member of PJM compared to the base case in each of the five defection scenarios are shown in Table 3.⁴² As major PJM electricity sellers, when Pennsylvania or Illinois exit the market, the remaining states must make up for the supply shortage. These generation changes can be significant. For example, if Pennsylvania defects, “New Jersey and Ohio end up carrying 45% of the supply

35. Morehouse, *supra* note 2.

36. Walton, *supra* note 3.

37. *Maryland FRRs*, *supra* note 4.

38. *New Jersey FRRs*, *supra* note 5.

39. Dauwalter, *supra* note 1, at 1-38, (“A capacity market is intended to ensure resource adequacy to meet peak load demand at any time throughout the year. PJM specifies the demand for capacity three years out and bidders offer to ensure their capacity is available at that time at a given price per MW (technically a \$/MW-month offer). These capacity payments accrue to the bidders and are paid by the customers of the utilities serving load in PJM. Withdrawing from the capacity market means that resource adequacy requirements must be met by other means (through utility-owned generation or through bilateral contracts between utilities and suppliers). They cannot be simply ignored by the utilities in the state defecting from the capacity market.”).

40. In PJM, unlike in some other RTOs, the states do not have formal standing as “stakeholders,” meaning that they lack a formal mechanism within PJM to influence or vote on specific market designs. States can attempt to influence market designs in PJM through the Organization for PJM States (OPSI, a liaison group), through FERC’s regulatory process, or through actual or threatened defection as modeled in this article. *Id.* at 3.

41. *Id.*

42. *Id.* at 15.

deficit (on a MWh basis).⁴³ Smaller states can also see dramatic changes.⁴⁴ In the Pennsylvania exit scenario, both Delaware and the District of Columbia must nearly double their electricity generation compared to the base case.⁴⁵

Table 3: Changes in total generation after a state's producers and consumers leave PJM.⁴⁶

State	State's electricity purchases from PJM's market (MWh) ^a		Net sales (+) or Net purchases (-) (MWh) ^b	Total state's generation sold to PJM's electricity market (MWh)		Percent change in total generation sold to PJM compared to Base Case simulation ^c				
						Base Case	NJ Exit	MD Exit	VA Exit	PA Exit
DC	8,772,540	(1.11%)	-8,718,198	54,343	(0.01%)	-0.76%	-8.82%	-19.17%	96.46%	12.83%
DE	12,133,001	(1.54%)	-8,766,328	3,366,672	(0.44%)	-3.15%	-15.50%	-15.14%	88.04%	4.72%
IL	96,511,187	(12.26%)	47,367,949	143,879,136	(19.01%)	-0.09%	-1.37%	-3.68%	0.87%	N/A
IN	21,194,371	(2.69%)	8,034,801	29,229,172	(3.86%)	-1.73%	-14.34%	-30.42%	14.43%	18.63%
KY	25,082,353	(3.19%)	-17,991,769	7,090,584	(0.94%)	-2.88%	-5.74%	-12.65%	59.97%	5.51%
MD	66,892,050	(8.50%)	-36,072,041	30,820,009	(4.07%)	0.15%	N/A	-9.17%	25.26%	7.78%
MI	5,864,708	(0.75%)	21,820,652	27,685,361	(3.66%)	-0.39%	-2.40%	-6.42%	2.78%	2.78%
NC	3,565,230	(0.45%)	-604,507	2,960,723	(0.39%)	-0.21%	-0.85%	-2.58%	1.31%	0.99%
NJ	76,910,073	(9.77%)	-14,542,063	62,368,010	(8.24%)	N/A	-6.89%	-9.68%	31.21%	1.67%
OH	155,915,008	(19.81%)	-38,733,399	117,181,608	(15.49%)	-0.74%	-10.37%	-21.48%	10.41%	13.85%
PA	155,018,292	(19.69%)	105,720,286	260,738,578	(34.46%)	-0.84%	-2.02%	-5.59%	N/A	2.26%
TN	4,214,924	(0.54%)	-2,529,391	1,685,533	(0.22%)	0.01%	-1.16%	-3.86%	0.98%	0.84%
VA	123,462,023	(15.68%)	-75,048,248	48,413,776	(6.40%)	-0.21%	-6.98%	N/A	15.32%	11.01%
WV	31,670,684	(4.02%)	-10,451,470	21,219,214	(2.80%)	-8.43%	-30.61%	-52.69%	45.55%	45.03%
Change in remaining coalition's total generation:						-0.86%	-5.43%	-10.92%	14.13%	7.71%

43. Dauwalter, *supra* note 1, at 16.

44. *Id.* 15-16.

45. *Id.*

46. *Id.* at 15.

^a Sales figures are for the Base Case and are assumed to be unchanged under defection. Only the portion of state's 2019 demand served through purchases in PJM is represented. For example, Illinois' purchases correspond to ComEd zone demand which is the only state portion in PJM's service territory.

^b Net PJM sales/purchases are for the Base Case and are calculated as Total Generation – Demand in PJM markets.

^c The change in total generation is not modeled for the defecting state.

The opposite effect holds when a net buyer, such as Virginia, exits the market. With a net demand removed from the system, the remaining states reduce their generation. Despite sharing no borders with Virginia, suppliers in Indiana and Ohio must reduce their sales into PJM's market by 30.42% and 21.48%, respectively when Virginia defects.⁴⁷ This illustrates the extensive spillover effects caused by leaving a large interconnected system like PJM.

As the largest net sellers and buyers in the market, Pennsylvania, Illinois, and Virginia represent the extremes of the defection scenarios.⁴⁸ Naturally, the results of the New Jersey and Maryland defection scenarios fall in between those of the extreme cases.⁴⁹ Both states are net buyers, but Maryland generally buys more power than New Jersey. As a result, the spillover impacts on generation in the remaining states are larger in the Maryland exit scenario than the New Jersey exit scenario.⁵⁰

C. Impacts of State Defection on Electricity Prices

Table 4 “reports the impact of state defection from PJM on the average cost to serve load.”⁵¹ Here, the annual cost to serve load is defined as the sum of each hour's in-state purchases multiplied by each state's wholesale market clearing price in that hour.⁵² The average is calculated by dividing this wholesale cost by the total number of MWhs consumed in the year.⁵³ It represents the cost retailers incur to purchase power from the wholesale market before ultimately selling it to consumers.⁵⁴ This can be taken as a “proxy for consumer welfare, with higher values” corresponding to higher consumer electricity bills (and thus lower consumer welfare).⁵⁵

47. Dauwalter, *supra* note 1, at 16.

48. *Id.* at 15.

49. *Id.*

50. *Id.* at 16.

51. Dauwalter, *supra* note 1, at 17.

52. *Id.*

53. *Id.*

54. *Id.*

55. Dauwalter, *supra* note 1, at 17. In general, higher wholesale costs will translate to higher retail bills so this assumption is fair for the purposes of this article. The mechanism by which higher wholesale costs translate into higher retail bills will, in reality, vary by state. In states with active retail competition (like Pennsylvania, for example), competitive suppliers may have mechanisms to hedge volatility or otherwise shift risk when wholesale costs rise. This may mean that changes in wholesale costs may not be directly passed on to consumer bills in a dollar-for-dollar fashion. *Id.*

The implications of the results in Table 4 are tied to the balance of supply and demand in PJM's system. "The average cost to serve load" in the base case reflects the co-optimization of generation and reserves in the entire system.⁵⁶ When a net seller exits, the rest of the system must make up for the supply deficit, causing the market to clear with more expensive units.⁵⁷ Conversely, when a net buyer exits, fewer units need to be dispatched in the remaining system, causing the most expensive units to fall out of the merit order and the market clearing price to decrease.⁵⁸

Table 4: Average cost to serve load after state defection.⁵⁹

State	Net sales (+) or Net purchases (-) (MWh) ^b	Avg cost to serve load (\$/MWh)	Percent change in average cost to serve load compared to Base Case simulation ^c				
			Base Case	NJ Exit	MD Exit	VA Exit	PA Exit
DC	-8,718,198	\$27.76	-0.52%	-4.28%	-10.12%	7.26%	4.75%
DE	-8,766,328	\$27.75	-4.53%	-3.95%	-4.53%	8.04%	1.13%
IL	47,367,949	\$25.44	-0.52%	-2.23%	-6.39%	-0.03%	N/A
IN	8,034,801	\$27.61	-0.48%	-4.19%	-10.14%	1.76%	4.72%
KY	-17,991,769	\$25.93	-0.16%	-2.60%	-6.31%	12.48%	2.98%
MD	-36,072,041	\$27.83	-0.88%	N/A	-9.64%	7.38%	4.42%
MI	21,820,652	\$27.61	-0.48%	-4.19%	-10.14%	1.76%	4.72%
NC	-604,507	\$27.78	-0.53%	-4.28%	-10.21%	6.78%	4.75%
NJ	-14,542,063	\$27.58	N/A	-3.99%	-4.52%	7.68%	1.08%
OH	-38,733,399	\$27.70	-0.49%	-4.20%	-10.12%	1.70%	4.73%
PA	105,720,286	\$25.95	-1.23%	-2.62%	-5.02%	N/A	2.13%
TN	-2,529,391	\$27.81	-0.50%	-4.24%	-10.27%	1.63%	4.74%
VA	-75,048,248	\$27.78	-0.54%	-4.27%	N/A	5.99%	4.73%
WV	-10,451,470	\$27.80	-0.49%	-4.23%	-10.24%	4.19%	4.73%
Full Coalition:		\$27.04	-0.97%	-3.82%	-7.98%	5.45%	4.46%

^a Demand figures are for the Base Case and are assumed to be unchanged under defection.

⁵⁶ *Id.*

⁵⁷ *Id.* This generally holds for all states that remain after a net-exporter exits with one exception: when Pennsylvania defects, the average cost to serve load in Illinois decreases. However, the magnitude of this change is very small. Dauwalter, *supra* note 1, at 17.

⁵⁸ *Id.* at 1-38, 18.

⁵⁹ *Id.* at 17.

^b Net exports/imports are for the Base Case and are calculated as Total Generation - Demand.

^c The change in average cost to serve load is not modeled for the defecting state.

Table 5 reports the changes in state-level generators' profits (in \$ per MWh) compared to the base case after a state defection.⁶⁰ Profits are estimated as the difference between wholesale revenues minus the costs of production represented in the EMST's Unit Commitment and Economic Dispatch models which include start-up costs, shut-down costs, no-load costs and fuel costs.⁶¹ The varied impacts of state defection on profits are likely tied to variations in generation mix between states. Like generators generally have like costs, meaning that generators of the same technology will be clustered close to one another in the supply curve, and thus will be close to one another in the merit order. As demand shifts after a state defection, the cost optimization of the new system may shift each state's merit order enough to include or exclude these 'fuel/technology' clusters, impacting the overall profitability of all generators in the system.⁶²

Table 5: Generators' sales profits after state defection.⁶³

State	Net sales (+) or Net purchases (-) (MWh) ^b	Generators' sales Profits (\$/MWh) Base Case	Percent change in generators' sales profits compared to Base Case simulation ^c				
			NJ Exit	MD Exit	VA Exit	PA Exit	IL Exit
DC	-8,718,198	\$3.76	4.97%	2.45%	4.42%	-0.83%	3.55%
DE	-8,766,328	\$5.22	-42.58%	-20.72%	-7.50%	-49.26%	3.19%
IL	47,367,949	\$12.03	-0.79%	-2.76%	-7.92%	-0.81%	N/A
IN	8,034,801	\$6.95	0.01%	4.39%	11.69%	-8.57%	-2.72%
KY	-17,991,769	\$4.10	2.24%	2.24%	7.07%	41.96%	0.25%
MD	-36,072,041	\$16.25	-1.81%	N/A	-4.90%	-9.86%	-0.73%
MI	21,820,652	\$12.81	-0.64%	-6.12%	-13.94%	1.24%	6.99%
NC	-604,507	\$23.59	-0.47%	-4.25%	-9.86%	6.13%	4.55%
NJ	-14,542,063	\$9.92	N/A	-3.20%	-0.47%	-4.98%	1.22%
OH	-38,733,399	\$5.64	-1.19%	-4.26%	-13.05%	-3.59%	4.24%
PA	105,720,286	\$6.60	0.64%	-3.17%	-6.50%	N/A	3.79%

60. See Table 5.

61. See Dauwalter, *supra* note 1, at 6, 11, 13, 37.

62. *Id.* at 18.

63. *Id.*

TN	-2,529,391	\$8.66	-1.36%	-12.04%	-27.93%	5.44%	14.26%
VA	-75,048,248	\$13.37	-0.80%	-1.07%	N/A	-2.72%	-1.01%
WV	-10,451,470	\$5.97	6.46%	26.48%	60.67%	-13.15%	-17.38%
Full coalition:		\$8.85	-0.22%	-1.85%	-4.48%	-4.64%	1.20%

^b Net exports/imports are for the Base Case and are calculated as Total Generation - Demand.

^c The change in average cost to serve load is not modeled for the defecting state.

D. Welfare Calculations

The calculations of producer and consumer welfare follow from the findings of the previous section. Producer surplus is the sum of the total annual wholesale profits for each state (also equal to the per MWh of generation multiplied by each state's total electricity sales in the PJM market).⁶⁴ The calculation results are shown in Table 6.⁶⁵ Green values represent increases in producer surplus, while red values represent decreases.⁶⁶ These results vary from the generation profit results from Table 5 because they reflect both the change in average per MWh of generation and the change in generation itself. (*Consult Table 3*).⁶⁷

In general, these results suggest that if a net buyer exits the PJM wholesale market, the producer surplus decreases in the remaining states, while producer surplus increases when a net seller exits.⁶⁸ There are two exceptions to this rule: Delaware and Washington, D.C. Delaware's producer surplus decreases by 4.59% when Pennsylvania exits from the energy market.⁶⁹ We can see from Table 3 that Delaware must increase generation by 88.04% to help make up for the supply deficit caused by Pennsylvania's departure.⁷⁰ However, the profitability of Delaware's generating fleet decreases by 49.26% under the same scenario (Table 5).⁷¹ The effect of the drop in profitability dominates the effect of the increased generation, resulting in a net loss of producer surplus.⁷² Conversely, Washington, D.C.'s increased profitability dominates the reduction in generation when New Jersey defects, causing a net increase in producer surplus.⁷³

Table 6: Producer surplus by state after state defection.⁷⁴

64. See Table 6.

65. *Id.*

66. *Id.*

67. See Table 5; see Table 6.

68. See *supra* Table 5.

69. *Id.*

70. *Id.*

71. *Id.*

72. See generally *supra* Tables 3 and 5, see generally Table 6.

73. See generally *supra* Tables 3 and 5, see generally Table 6.

74. Dauwalter, *supra* note 1, at 19.

State	Producer Surplus (\$)	Percent change in producer surplus compared to Base Case simulation				
	Base Case	NJ Exit	MD Exit	VA Exit	PA Exit	IL Exit
DC	204,448	4.17%	-6.59%	-15.60%	94.84%	16.84%
DE	17,582,294	-44.39%	-33.01%	-21.50%	-4.59%	8.06%
IL	1,730,433,535	-0.88%	-4.09%	-11.31%	0.06%	N/A
IN	203,084,173	-1.73%	-10.58%	-22.28%	4.63%	15.41%
KY	29,033,448	-0.71%	-3.62%	-6.47%	127.09%	5.77%
MD	500,707,376	-1.66%	N/A	-13.63%	12.92%	7.00%
MI	354,759,876	-1.03%	-8.37%	-19.47%	4.06%	9.97%
NC	69,846,394	-0.69%	-5.06%	-12.19%	7.52%	5.58%
NJ	618,661,033	N/A	-9.87%	-10.10%	24.68%	2.91%
OH	661,264,989	1.92%	14.18%	31.73%	6.45%	18.67%
PA	1,720,955,038	-0.20%	-5.13%	-11.73%	N/A	6.14%
TN	14,593,773	-1.35%	-13.06%	-30.71%	6.47%	15.22%
VA	647,413,157	-1.01%	-7.97%	N/A	12.18%	9.89%
WV	126,666,334	-2.52%	-12.23%	-23.99%	26.41%	19.83%
Full coalition:		-1.07%	-7.18%	-14.91%	8.84%	9.01%

We also make a proxy calculation for consumer surplus using wholesale energy payments. The true consumer surplus would require a willingness-to-pay measure for electricity by individuals in each state. Since we are primarily interested in directional effects, we argue that the payments made to wholesale generation are a sufficient measure for capturing changes in consumer surplus under different defection scenarios. To calculate this value, we multiply the average cost to serve load (Table 4) by the state's purchases in PJM's market.⁷⁵ This is the amount of money that would be conveyed to retailers to provide generation services to electricity consumers.⁷⁶

The literature suggests our approach for understanding changes in true consumer surplus is viable. First, electricity consumers are relatively unresponsive to

75. See *supra* Tables 3 and 4.

76. See *supra* Tables 3 and 4.

marginal price fluctuations.^{77 78 79} Rather, the average cost of delivered electricity consumers face has a greater influence on consumption decisions.⁸⁰ Furthermore, it has been demonstrated that, as with most goods, long run demand for residential electricity is more elastic than short run demand.⁸¹ We argue, then, that consumers would measure their welfare based on the average cost they are paying for electricity and would maintain their current consumption in the short run even under average price changes on their electric utility bill. In sum, decreased average price levels will have salience to consumers and reflect an increase in consumer welfare.

We are left, then, with determining how retailers may or may not change their pricing behavior based on changes to the wholesale pricing. Here, again, the literature suggests that fluctuations in the marginal costs of producers are often absorbed by the retailers or can be hedged using various mechanisms.^{82 83 84} That is, retail suppliers will likely not pass-through high frequency marginal cost fluctuations like short-lived price spikes. Instead, we claim that changes in levels (i.e., average cost) will trigger pricing adjustments.

So, under a state defection, if the retailers in a remaining state experience a lower average cost of supply, we expect it would trigger a downward adjustment to retail utility bills, directly increasing consumer welfare. Similarly, an increase in average cost of supply would result in an analogous decrease in consumer welfare. As we assume that electricity demand in the remaining states remains constant in the short run, the calculated changes in consumer surplus directly mirror the changes in average cost to serve load from Table 4.⁸⁵ A decrease in a state's average cost to serve load in Table 4 translates to an equivalent increase in consumer surplus for the state's consumers, and vice versa.⁸⁶

These results illustrate the tradeoffs between producers and consumers in the wholesale electricity market. In nearly all scenarios, an increase in producer surplus corresponds to a decrease in consumer surplus and vice versa. Whether a

77. Severin Borenstein, *To What Electricity Price do Consumers Respond? Residential Demand Elasticity Under Increasing-Block Pricing* 1 (Ctr. for the Study of Energy Mkts., Working Paper Series CSEM WP 195, 2009), <https://haas.berkeley.edu/wp-content/uploads/csemwp195.pdf>.

78. Severin Borenstein & James B. Bushnell, *Do Two Electricity Pricing Wrongs Make a Right? Cost Recovery, Externalities and Efficiency* 1 (Nat'l Bureau of Econ. Rsch., Working Paper 24756, 2018), <https://www.nber.org/papers/w24756>.

79. Jeong-Shik Shin, *Perception of Price When Price Information is Costly: Evidence from Residential Elasticity Demand*, 67 REV. OF ECON. & STAT. 591, 591 (1985). <https://www.jstor.org/stable/1924803>.

80. Koichiro Ito, *Do Consumers Respond to Marginal or Average Price? Evidence From Nonlinear Electricity Pricing*, 104 AM. ECON. REV. 537, 560, (2014).

81. Xing Zhu et al., *A Meta-Analysis on the Price Elasticity and Income Elasticity of Residential Electricity Demand*, 201 J. OF CLEANER PROD. 169, 169-177 (2018).

82. Lucas W. Davis & Erich Muehlegger, *Do Americans Consume Too Little Natural Gas? An Empirical Test of Marginal Cost Pricing*, 41 RAND J. OF ECON. 791, 808 (2010).

83. Lee S. Friedman, *Energy Utility Pricing and Customer Response in Energy Policy*, in REGULATORY CHOICES: A PERSPECTIVE ON THE DEVELOPMENTS IN ENERGY POLICY 10, 17-18, 39, 41 (Richard J. Gilbert ed., 1991).

84. Steven L. Puller & Jeremy West, *Efficient Retail Pricing in Electricity and Natural Gas Markets*, 103 AM. ECON. REV. 350, 351-52, 354 (2013).

85. See *supra* Table 4.

86. *Id.*

state is better or worse off after a defection is a broader welfare question that must include how a state prioritizes consumer and producer surplus as well as some equity considerations. Our simulations predict two distinct exceptions to this producer/consumer tradeoff: Delaware is unambiguously worse off if Pennsylvania defects (both producers and consumers lose), and DC is unambiguously better off if New Jersey defects (both producers and consumers gain).⁸⁷

E. Emissions

Table 7: Annual CO₂ emissions after state defection.⁸⁸

State	CO ₂ Emissions (tons)		Percent change annual CO ₂ emissions compared to Base Case simulation ^c					CO ₂ Emissions Intensity (tons/MWh)	Percent change in annual CO ₂ emissions intensity compared to Base Case simulation ^c				
	Base Case		NJ Exit	MD Exit	VA Exit	PA Exit	IL Exit		Base Case	NJ Exit	MD Exit	VA Exit	PA Exit
DC	9,696	(0.00%)	-0.85%	-27.74%	-42.08%	41.06%	44.04%	0.178	-0.09%	-20.75%	-28.34%	-28.20%	27.66%
DE	2,352,029	(0.87%)	-36.60%	-44.10%	-9.92%	23.62%	3.34%	0.699	-34.54%	-33.85%	6.15%	-34.26%	-1.32%
IL	38,408,952	(14.19%)	-0.18%	-3.94%	-10.30%	3.06%	N/A	0.267	-0.09%	-2.61%	-6.87%	2.17%	N/A
IN	16,065,906	(5.94%)	-2.58%	-21.47%	-42.49%	21.87%	28.25%	0.55	-0.86%	-8.32%	-17.35%	6.50%	8.11%
KY	5,585,576	(2.06%)	-3.40%	-5.70%	-13.32%	78.10%	4.72%	0.788	-0.54%	0.04%	-0.77%	11.33%	-0.75%
MD	9,774,654	(3.61%)	0.16%	N/A	-12.76%	36.34%	11.24%	0.317	0.01%	N/A	-3.95%	8.85%	3.21%
MI	3,472,462	(1.28%)	-1.27%	-7.79%	-20.26%	9.01%	9.01%	0.125	-0.88%	-5.52%	-14.79%	6.06%	6.06%
NC	15,649	(0.01%)	-1.04%	-4.13%	12.52%	6.37%	4.81%	0.005	-0.83%	-3.31%	-10.20%	4.99%	3.78%
NJ	13,145,484	(4.86%)	N/A	-14.52%	-19.18%	66.31%	3.53%	0.211	N/A	-8.19%	-10.52%	26.75%	1.83%

87. Dauwalter, *supra* note 1 (technically, our simulations also show that Illinois is unambiguously better off under a Pennsylvania defection but the changes in producers surplus and consumer wholesale costs are 0.06% and -0.03%, respectively).

88. *Id.* at 16.

OH	62,074,508	(22.94%)	-1.32%	-17.96%	-34.85%	18.76%	24.73%	0.53	-0.58%	-8.47%	-17.03%	7.56%	9.56%
PA	95,672,023	(35.36%)	-1.30%	-4.41%	-11.97%	N/A	5.48%	0.367	-0.46%	-2.44%	-6.76%	N/A	3.15%
TN	744,770	(0.28%)	0.01%	-1.16%	-3.86%	0.98%	0.84%	0.442	0.00%	0.00%	0.00%	0.00%	0.00%
VA	6,319,909	(2.34%)	-0.65%	-24.28%	N/A	54.95%	39.41%	0.131	-0.44%	-18.60%	N/A	34.37%	25.58%
WV	16,950,714	(6.26%)	-10.96%	-38.37%	-66.04%	57.34%	56.90%	0.799	-2.76%	-11.18%	-28.22%	8.10%	8.18%
Total	270,592,332		-2.15%	-12.24%	-22.91%	26.89%	17.01%	0.358	-1.30%	-7.20%	-13.46%	11.18%	8.63%

^a Demand figures are for the Base Case and are assumed to be unchanged under defection.

^b Net sales/purchases are for the Base Case and are calculated as Total Generation – Demand within PJM.

^c The change in the annual CO₂ emissions is not modeled for the defecting state.

Conflict between state policy goals and RTO market designs represent one motivation for states to consider defection from regional electricity markets. The RTO, in principle, provides robustness and stability by expanding supply to meet market load demand. But participation in an RTO may also hamper state policy levers to encourage new renewable generation investments or to restrict a state's utilities from contracting with high-emissions generators.⁸⁹ It also introduces complexity to projections of any one state's generation level and mix as part of the regional supply network meeting regional demand.⁹⁰ The latter can imply substantial spillover effects in emissions arising from state RTO defection.⁹¹ These spillover effects are similar in nature to the "leakage" effects that arise from incomplete environmental regulation, where the regulation simply shifts emissions from one location to another.⁹² By evaluating the CO₂ emissions before and after different defection scenarios, we get a sense of the impacts that one state's actions can have not only on another state's production, but also on its ability to meet its climate initiatives. This also shows the importance of state policymakers considering the interstate market network in which its utilities operate in setting broader environmental and economic policy goals – and federal policymakers too as FERC regulates RTOs.

89. *North Dakota v. Heydinger*, 835 F.3d 912 (8th Cir. 2016) (a group of power generators in North Dakota challenged Minnesota's Next Generation Energy Act (NGEA), which would have prohibited Minnesota utilities from contracting with high-emissions power plants in other states. With utilities in both states participants in the markets operated by the Midcontinent Independent Systems Operator (MISO), the NGEA would have effectively placed MISO-dispatched power plants in North Dakota under regulatory control of the Minnesota commission).

90. *Dauwalter*, *supra* note 1, at 10-11.

91. *Id.*

92. *Id.*

Table 7 reports the total annual CO₂ emissions for each state compared to the base case under each of the defection scenarios.⁹³ The red values represent negative changes in emissions.⁹⁴ These results are closely related to the changes in total generation from Table 3.⁹⁵ In general, if a state experiences an increase in generation, it also experiences an increase in emissions, though the magnitude of the change depends on the emissions intensity of the generation fleet.⁹⁶ For example, when any net buyer defects, Ohio reduces its total generation less than the amount that its CO₂ emissions drops.⁹⁷ In other words, “the more CO₂ intensive generators in Ohio begin to fall out of the merit order post defection.”⁹⁸ This effect arises not because of any particular policy related to CO₂ emissions but because high-emissions power plants are generally less efficient and therefore more expensive to operate. The opposite takes place when a net seller defects. “Under Pennsylvania and Illinois defect scenarios, Ohio increases its generation by 10.41% and 13.85%, respectively, while CO₂ emissions jump by 18.76% and 24.73%.”⁹⁹ “Indeed, the fleet of plants that are on the margin throughout the year produce more CO₂ per MWh than the inframarginal plants.”¹⁰⁰

As illustrated by Table 7, the emissions intensity of generation of each state in the PJM region varies under each defection scenario as different types of generators fall into or out of the merit order.¹⁰¹ These changes often, though not always, follow the changes in each state’s total generation (Table 3).¹⁰² One notable exception is Delaware. Under the net-exporter scenarios where Pennsylvania and Illinois exit the market, Delaware’s generation increases by 88.04% and 4.72% respectively to make up for the generation shortfall.¹⁰³ The resulting emissions increases are smaller than the generation increases, leading to reductions in overall carbon intensity of 34.26% and 1.32%.¹⁰⁴ This result indicates that for this particular state, the generators often just outside of the merit order in the Base Case are lower emitting than the average generator inside the merit order. This is different from most other states in PJM, in which the less frequently dispatched peaker plants are often more emissions intensive than the more commonly dispatched generators.

IV. DISCUSSION

Our analysis suggests a general tradeoff between producer and consumer welfare in the remaining states if an individual state were to exit the PJM whole-

93. *Id.*

94. *See* Dauwalter, *supra* note 1, at 16.

95. *Id.*

96. *Id.*

97. *Id.*

98. *See* Dauwalter, *supra* note 1, at 16.

99. *Id.* at 16-17.

100. *Id.* at 17.

101. *Id.* at 16.

102. *See* Dauwalter, *supra* note 1, at 16.

103. *Id.*

104. *Id.*

sale electricity market. How the net impact would be valued by a state would depend on that state's relative weighting of producer and consumer welfare. We believe this is a distinctly political question. We foresee a state's total welfare calculation taking the form:

$$W_{i,k} = (1 - \lambda_i)PS_{i,k} + \lambda_i v_i CS_{i,k}$$

Where $W_{i,k}$ is the total welfare of state i under scenario k , PS is producer surplus, CS represents our proxy for consumer surplus (consumer wholesale costs), v_i is a scaling measure converting the proxy consumer surplus value to true consumer surplus for state i , and $\lambda_i \in [0,1]$ represents the political preference for producer or consumer welfare. For example, $\lambda_i = 1$ means that state i only considers consumer welfare in its total welfare measure, and thus the state would consider any scenario in which a net buyer defects as a benefit. If a net exporter were to defect, consumer welfare would decrease and the state would consider itself negatively impacted.

We also find that state defection has substantial spillover effects, affecting both producer and consumer welfare in remaining states. This introduces an interesting question of coalition dynamics into organizations like PJM, as spillover effects could cause remaining states to reconsider their participation in this market. Even if state defection threats are purely strategic, with the goal of influencing market design or FERC regulation, the threats themselves may affect how market participants in remaining states view the benefits and costs of market design decisions. If a large net buyer or net seller state, such as Virginia or Pennsylvania, were to defect, it is not implausible that other states could choose to exit the market to avoid experiencing significant changes to their own electricity producers and consumers. It is also possible that the conditions created by a state defection could make it more appealing for other states to join PJM. (A Pennsylvania defection, for example, could create an opportunity for another net supplier with sufficient transmission interconnection.) Additional modeling, including analysis of impacts on the defecting state itself, could help determine the types of conditions that could lead to a cascading effect of state defections. Understanding the landscape that could bring about an unraveling of the PJM coalition would be valuable to both state and federal regulators.

In addition to the producer and consumer welfare effects, state defection from the PJM wholesale market also has important climate policy implications for the remaining coalition. In general, when a net seller leaves the market, the remaining states are left to make up for the shortfall, leading to increased reliance on more expensive and higher emitting generators. This could place additional strain on the remaining coalition in a time when states are working to reduce emissions to meet climate goals. Although the changes in emissions of the state exiting the market are also needed to fully understand the climate impacts of state defection, this analysis highlights the importance of interstate cooperation and coordination for maximizing efficiency and grid decarbonization.

We note that this analysis focuses on defection from wholesale markets rather than capacity markets. Furthermore, our results do not account for other benefits of participating in an RTO, including shared investment in transmission infrastructure, grid reliability, and resiliency. A model that considers these factors would

lead to more thorough welfare calculations. Such a complete analysis is beyond the scope of this paper.

V. CONCLUSION

This study investigates the welfare effects on market participants that remain in an RTO following a state defection from the wholesale energy market. While previous reports investigated the effects of a state defection from the PJM capacity market, our efforts give a fuller picture of the complex relationships between coalition members and the instability that would be introduced by state defection from the wholesale market. We find, generally, that if a net buyer defects from the wholesale energy market, the remaining states' producers are worse off while the remaining states' consumers are better off. The opposite effect holds true if the defecting state is a net-seller. The overall welfare ramifications depend on how a state values producer surplus relative to consumer surplus. Furthermore, state defection can have important impacts on electricity sector emissions in the remaining states, impacting those states' ability to meet their climate goals. However, as mentioned before, the possibility remains that both utilities and power producers of the defecting state buy and sell electricity from/to PJM market participants not in the electricity market but through bilateral transactions, therefore mitigating all the effects discussed here.¹⁰⁵

It is unclear how serious state defection threats from PJM were when they were issued in 2020.¹⁰⁶ There have been cases of individual transmission owners moving from one RTO to another (as Duquesne Light did when it left MISO to join PJM in 2005), but as of the time of this writing, no state defections have occurred. Some of the policy concerns underlying state defection threats (e.g., the MOPR) were diminished by subsequent softening of the terms, which allowed for the possibility that state-subsidized generation sources could qualify for capacity payments in PJM auctions.¹⁰⁷ That said, the prospect of state defection from an RTO, especially one covering as many states as PJM, raised some important questions about the strength of the complex connections within an RTO coalition that affect costs, prices, and environmental performance in subtle and profound ways. By examining these interactions, this article underscores the importance of policymakers at the state and federal levels recognizing the effects of an RTO's structure and rules on the size and distribution of the economic welfare and environmental performance of its constituents.

105. *Id.*

106. Dauwalter, *supra* note 1.

107. Dan R. Skowronski, *PJM Revisions to MOPR Go Into Effect*, SAUL EWING, (Oct. 11, 2021), <https://www.saul.com/insights/alert/pjm-revisions-mopr-go-effect>.

INCORPORATING ENVIRONMENTAL CONCERNS INTO WHOLESALE ELECTRIC MARKETS: THE IMPACT OF REGIONAL TRANSMISSION ORGANIZATION GOVERNANCE MODELS ON ENGO PARTICIPATION IN STAKEHOLDER PROCESSES (PART I)

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Synopsis: Regional Transmission Organizations (RTOs) operate the transmission grid and manage the electricity markets for more than 60% of the electricity supply in the United States. RTO governance combines independent board members with market participant stakeholders who together must navigate within sometimes blurred state and federal jurisdictional boundaries. RTO governance models vary between the seven RTOs serving North America. RTOs emerged two decades ago and were structured around creating open access and enhancing economic efficiency in the sale, purchase, and transmission of wholesale electricity. Environmental issues received different treatment during RTO formation compared to what they are afforded now. Given the historic and increasing importance of electricity production to achieving local, regional, and global environmental goals, RTO governance bodies are being asked to meet the challenge of expeditiously integrating low carbon and distributed resources into these market constructs. This challenge is creating tensions between federal and state policymakers and other stakeholders.

This, the first of two companion articles, examines RTO governance processes in the seven RTOs, the importance of RTOs in the transition to a low-carbon future, the value of including environmental non-governmental organizations (eNGOs) in RTO governance processes, and how RTOs integrate environmental interests into their governance processes. Our article focuses on eNGOs, who are not market participants with a market interest and represent environmental con-

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cerns that were considered and incorporated differently in the stakeholder processes when each of the RTOs were formed. We survey the historic and emerging role of eNGOs in the stakeholder process, the structures of each RTOs’ governance process, each model’s success in incorporating environmental interests in the decision making, and whether those structures have adapted over time to improve substantive and procedural access to key decisions for these stakeholders and their policy goals.

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I. SECTION I

A. Introduction

RTO¹ stakeholder participation is “complicated, technical, and expensive,”² but participation is a necessary element of accountability. RTOs rely on stakeholders to hold the RTO accountable to its mission ensuring open access and facilitating efficient markets that serve the public interest. The term stakeholder is broader than market participant, it goes beyond those who have market interests to include all parties with an interest in the broader performance of the RTO. In fact, many RTOs intentionally differentiate between market participants and stakeholders and allocate rights and responsibilities to both groups. Since the number

1. We broadly use the term RTO to include both Regional Transmission Organizations and their counterpart, Independent System Operators (ISOs).

2. Michael H. Dworkin & Rachel A. Goldwasser, *Ensuring Consideration of the Public Interest in the Governance and Accountability of Regional Transmission Organizations*, 28 ENERGY L.J. 543, 583 (2007).

of affected stakeholders will exceed the number of market participants, stakeholder governance processes should include more parties than just those with a financial interest in the markets.

This article is the first half of a two-part effort focusing on the role of a particular stakeholder, eNGOs, in RTO stakeholder governance processes. eNGO participation in RTO stakeholder governance processes is not consistent across the seven RTOs. This article details the formal substantive and procedural participation rights of eNGOs in RTO governance processes in each RTO. The article compares the procedures for gaining access to the governance processes in each RTO. The companion article uses interviews with market stakeholders to discuss how those procedures are applied in practice and to develop recommendations for improving formal and informal participation opportunities. Section I explores the history of RTO governance, the challenges facing RTO stakeholder governance, and the unique role played by eNGOs in RTO stakeholder governance. Section II analyzes eNGO participation opportunities in each RTO's stakeholder governance process. Section III presents key comparisons between RTO stakeholder governance processes.

B. The Importance of RTO Stakeholder Governance Processes

The products of RTO stakeholder governance processes have economic and non-economic impacts. RTO decisions shape the makeup and ease of access to the regional grid, what type of resources are allowed to participate and the operating and market protocols that are critical to determining market outcomes. Recognizing these impacts and addressing them in a fair and non-discriminatory process is a key part of ensuring open access and creating market efficiency. Consistent stakeholder involvement is necessary to ensuring that all voices are heard and incorporated in a balanced process that supports broad public acceptance and accountability.

The responsibility to hold RTOs accountable in its mission to serve the public interest is a responsibility shared amongst many entities. RTOs deal with a public good, electricity which is imbued with the public interest.³ Public interest is a broad term used across utility regulation to highlight that regulated markets have economic, social, and environmental impacts that should be weighed in governance processes. The question of course is who should then represent the public interest. Representing the public interest is not solely the purview of the government, of the state and local governments located within an RTOs' territory, and the RTO Board. The public interest has temporal and spatial elements that exceed the interests of governments and government officials; those elements that must

3. *Munn v. Illinois*, 94 U.S. 113, 125 (1876) (Regulation of industry in the public interest can be traced back to England. In the United States, *Munn v. Illinois* is a Supreme Court case upholding the power of governments to regulate private industries whose business is imbued with the public interest. The case forms the basis for the regulation of public utilities in the United States.); see also SCOTT HEMPLING, *REGULATING PUBLIC UTILITY PERFORMANCE: THE LAW OF MARKET STRUCTURE, PRICING AND JURISDICTION* 1-6 (2nd ed. 2021) (discussing purposes of regulatory law).

be integrated into and weighed by RTO governance processes. The ability to protect the public interest can also exceed the capacity of RTO boards.⁴ To be effective, fair, and transparent, RTO governance processes should balance the interests of “direct participants in market transactions” with “the interest of those affected by, but not parties to, those sales and purchases.”⁵

A diverse group of stakeholders is a benefit to an RTO. RTOs are voluntary organizations created under the Federal Energy Regulatory Commission’s (FERC) guidance with powers derived from the Federal Power Act. Their legitimacy is gained by being accountable to stakeholders. Accountability is created by governance processes that are inclusive of affected parties and that are effective in delivering upon the RTO’s mission. While participation in governance processes is important for accountability, it is only the initial step. Stakeholders must be able to effectively participate in the governance processes. Effective participation requires ensuring that barriers to participation are removed or minimized and that stakeholders can participate in all facets of the governance process and provide input into all aspects of RTO operations.

The services provided by an RTO are considerable. RTOs manage real-time and day ahead energy and ancillary service markets; monitor market participant actions; schedule transmission; plan for system upgrades and expansion; develop interconnection rules and managing the interconnection queue; and incentivizing investment in a reliable and efficient system. Moreover, they develop the rules for delivering these services. Subject to FERC approval, RTO governance processes are where decisions are made on market design, application of market rules, reforms to governance processes, how resources qualify to participate in the markets, how state and federal policies will be converted into market rules, and transmission system planning.

RTOs require constant stakeholder involvement to maintain their effectiveness. The RTOs are constantly responding to changing market dynamics; new state laws, regulations, and policies; new federal laws, regulations, and policies; and other exogenous and internal pressures. Stakeholders, whether in an advisory role or as part of a shared governance structure, provide viewpoints and perspectives from inside and outside of the market. Capturing the views and perspectives of relevant stakeholders will produce fairer and more successful outcomes.⁶ Capturing the views and perspectives of market and non-market participants expands the range of options considered, fosters ownership of outcomes, and reduces the likelihood of future conflict.⁷

NGOs are critical to holding RTOs accountable to their mission. They represent an element of the public interest not provided by other stakeholders. As Dworkin and Goldwasser wrote, “Neither the states nor the federal government

4. Dworkin, *supra* note 2, at 548.

5. *Id.* at 547.

6. Donna Vogler, et al., *Stakeholder Analysis in Environmental and Conservation Planning*, 7 LESSONS IN CONSERVATION 7 (2017), https://www.amnh.org/content/download/158575/2593966/file/LinC7_Stakeholder%20Analysis.pdf.

7. *Id.*

have demonstrated the ability to hold these organizations accountable to the public.”⁸ eNGOs contribute expertise on the environmental and equity impacts of market rules and system planning. They can highlight unaddressed issues and present options for mitigating the impacts that may otherwise be absent from discussions. Lastly, eNGOs provide much needed social and cultural context and democratize the stakeholder governance process. Ensuring their effective participation has only grown in importance with an increasing and more urgent focus on a transition to a clean energy future.

C. *The Value and Responsibility of RTOs*

RTO energy markets have saved customers billions of dollars on their energy bills by improving the coordination and dispatch of an expanding definition of resources, while optimizing the use of available transmission capacity. Retrospective studies of the economic savings of individual RTOs top hundreds of millions and billions of dollars per year in savings in using markets operated on the principle of economic efficiency, allowing for the coordination and dispatch of the least-cost resource to meet energy demand while maintaining system reliability.⁹ The growing interest for a more expansive RTO in the west, highlights how even regions at once skeptical of the benefits of broader organized markets, now appreciate the market efficiency benefits, particularly with the growing presence of intermittent renewable resources.

While RTOs have produced significant economic gains for market participants and utility customers, they are being asked to facilitate state environmental goals supported by growing federal incentives. The grid is transforming and will continue to transform as state and federal policies drive the construction of more renewable energy resources. The pressures on RTO markets to address state environmental policies and climate goals, to integrate more renewable energy resources, and to permit the participation of advanced energy technologies is increasing. The Energy Information Administration’s Annual Energy Outlook 2023 forecasts that renewable energy generation resources will be the fastest growing source of electricity generation through 2050.¹⁰ The growth in renewables will be driven by declining capital costs, by increasing state mandates for renewable energy procurement, and massive federal support contained the Inflation Reduction Act.¹¹ Renewable portfolio standards have been and continue to be a major driver of additions to renewable energy generation capacity; it is estimated that future

8. Dworkin, *supra* note 2, at 548.

9. Judy Chang et al., *Potential Benefits of a Regional Wholesale Power Market to North Carolina’s Electricity Customers*, BRATTLE GROUP 6 (Apr. 2019), https://www.brattle.com/wp-content/uploads/2021/05/16092_nc_wholesale_power_market_whitepaper_april_2019_final.pdf (collecting retrospective studies performed by individual RTOs and utilities).

10. *Annual Energy Outlook AEO2023*, ENERGY INFO. ADMIN. 10 (Mar. 2023), https://www.eia.gov/outlooks/aeo/pdf/AEO2023_Narrative.pdf.

11. *Id.* at 5.

RPS demands will require approximately a 50% increase in renewable energy generation by 2030.¹² Annual additions of large-scale battery storage capacity have grown exponentially in the past decade and doubled in the past two years.¹³ Much of that capacity was added in regions with RTOs.¹⁴

RTOs have been successful in efficiently incorporating renewable energy resources into their organized markets without compromising system reliability.¹⁵ The challenge is how to continue the integration of greater volumes of renewable energy resources and how to accelerate the integration of the resources and technologies needed to manage resource intermittency.

D. The Need to Integrate Environmental Considerations into RTO Stakeholder Governance

RTOs are responsible for developing and administering the rules that determine how the markets operate, including what resources can participate in its markets. From their early days, RTOs have played a major role in the integration of renewable energy resources into the electricity grid. Large footprints combined with operational control of generator dispatch enabled them to manage the intermittent nature of renewable energy resources. Responsibility for preparing transmission plans shapes the future of the electricity grid. Now, RTOs are being pushed to account for the carbon emissions of the generation resources that participate in their markets and to reduce participation barriers for low-carbon and distributed energy resources.¹⁶ Each obligations requires the active participation of stakeholder through RTO governance processes. Those processes seek advice and input from market participants, non-market participants, state agencies, and other stakeholders on proposed and finalized rule changes and relies on their involvement for successful adoption by FERC.

E. RTO and ISO Formation

RTOs operate the competitive wholesale energy markets that supply more than 60% of U.S. energy demand and plan for and operate, but do not own the transmission systems. In the United States, there are seven RTOs that operate the

12. Galen Barbose, *U.S. Renewables Portfolio Standards 2019 Annual Status Update*, LAWRENCE BERKELEY NAT'L LAB'Y 15, 24 (July 2019), https://eta-publications.lbl.gov/sites/default/files/rps_annual_status_update-2019_edition.pdf.

13. *Battery Storage in the United States: An Update on Market Trends*, ENERGY INFO. ADMIN. 5 (Aug. 2021), https://www.eia.gov/analysis/studies/electricity/batterystorage/pdf/battery_storage_2021.

14. *Id.*

15. See Kassia Miscek, *Surge of renewable generation leads to numerous SPP records, drop in lower prices*, S&P GLOBAL (Gary Gentile ed., Mar. 30, 2022) <https://www.spglobal.com/commodityinsights/es/market-insights/latest-news/electric-power/033022-surge-of-renewable-generation-leads-to-numerous-spp-records-drop-in-power-prices> (In SPP, renewable energy supplied more than 90% of load at different times in March 29 and 30, 2022); see also Dharna Noor, *Solar helps Texas carry energy load as heatwave puts power grid to test*, THE GUARDIAN (June 28, 2023), <https://www.theguardian.com/us-news/2023/jun/28/texas-heatwave-power-grid-solar-energy> (In ERCOT, renewable generation levels have set records in the summer of 2023 and are credited with helping maintain grid reliability during periods of extreme heat).

16. See, e.g., *Carbon Pricing in Wholesale Energy Markets: Frequently Asked Questions*, NYISO (Apr. 16, 2020), <https://www.nyiso.com/-/carbon-pricing-in-wholesale-energy-markets-frequently-asked-questions> (NYISO's discussion on implementing carbon pricing).

competitive markets.¹⁷ Of these seven RTOs, only Electricity Reliability Council of Texas ISO (ERCOT) comes under FERC's jurisdiction. Independent System Operators emerged from FERC Order 888, which was issued in 1996. FERC Order 2000, issued in 1999, led to the creation of Regional Transmission Organizations.¹⁸ ERCOT became an independent system operator subject to Texas' jurisdiction in 1996.¹⁹

The unique history of each RTO is visible in their governance structures. Current compositions of stakeholder groups reflect who was a market participant when the RTO formed, and who has entered the marketplace since the RTO commenced operations. Many RTOs and ISOs trace their historical origins to tight power pools that coordinated dispatch and shared generation resources amongst member utilities.²⁰ Incumbency is a strong factor in determining the current composition of the stakeholders.²¹ For example, a significant concentration of coal-fired generation in the Midwest RTOs (MISO, SPP, and PJM) is reflected in the composition of the stakeholder groups in those RTOs. State mandated divestiture of generation assets has also had a significant impact on the number and type of stakeholders in an RTO. Incumbency and historical development also affect the division of stakeholders into different groups and the allocation of voting rights. For example, ISO-NE has six stakeholder groups of which only the Alternative Resources group was added during the formation of the RTO.²² The other five stakeholder groups pre-date the formation of the RTO and connect back to the operation of the New England Power Pool.²³ Many of the RTOs have extensive operations histories before becoming an ISO or RTO and that influences the current state of governance processes.²⁴ NYISO, CAISO, and ERCOT are contained

17. The seven RTOs and ISOs discussed in the article are the Independent System Operator of New England (ISO-NE), the New York Independent System Operator (NYISO), the PJM Interconnection LLC (PJM), the Midcontinent Independent System Operator (MISO), the Southwest Power Pool (SPP), the California Independent System Operator (CAISO), and the Electricity Reliability Council of Texas (ERCOT).

18. *Regional Transmission Organizations*, 89 FERC ¶ 61,285 (1999) (The NYISO and CAISO ultimately chose not to pursue FERC approval to transform their ISO into an RTO. For the purposes of this article the distinction between RTOs and ISOs is not important).

19. *ERCOT Organization Backgrounder*, ERCOT <http://www.ercot.com/news/mediakit/backgrounder> (last visited July 23, 2023).

20. See, e.g., Jim Lazar, *Electricity Regulation In the US: A Guide*, THE REGUL. ASSISTANCE PROJECT 21 (2d ed. 2016), <https://www.raonline.org/knowledge-center/electricity-regulation-in-the-us-a-guide-2/>; see also W.M. Warwick, *A Primer on Electric Utilities, Deregulation, and Restructuring of U.S. Electricity Markets*, U.S. DEP'T OF ENERGY 45-46 (May 2002), https://www.pnnl.gov/main/publications/external/technical_reports/PNNL-13906.pdf (The New England Power Pool, the New York Power Pool, and the PJM Power Pool are the precursors to ISO-NE, NYISO, and PJM).

21. See, e.g., Ari Peskoe, *Is the Utility Transmission Syndicate Forever?*, 42 ENERGY L.J. 1, 29-57 (May 5, 2021) (discussing on the development of transmission planning in RTOs and the power of incumbency); see generally *Electric Power Markets*, FERC, <https://www.ferc.gov/electric-power-markets> (last visited July 18, 2023) (discussing history on the development of the different power markets).

22. *Order Granting RTO Status Subject to Fulfillment of Requirements and Establishing Hearing and Settlement Judge Procedures*, 106 FERC ¶ 61,280 at P 54 (requiring addition of sixth sector to stakeholder governance structure).

23. *Id.* (acknowledging proposed transfer of NEPOOL's stakeholder governance structure).

24. See, e.g., *NEPOOL's Evolution*, NEW ENG. POWER POOL, <https://nepool.com/about-nepool/> (last visited on July 23, 2023) (the New England Power Pool was formed in 1971); see also *PJM History*, PJM, <https://www.pjm.com/about-pjm/who-we-are/pjm-history> (last visited on July 23, 2023) (PJM began in 1927);

within the borders of a single state which creates a different dynamic for addressing state government policy than is available to the multi-state RTOs.²⁵

F. RTO Governance Models

There is no single model for RTO governance. RTOs are either single state entities (NYISO, ERCOT, or CAISO) or multi-state organizations (ISO-NE, PJM, MISO, and SPP).²⁶ Six of the seven RTOs are under FERC jurisdiction, while ERCOT operates outside of FERC jurisdiction.²⁷

The RTOs operate under a unique governance model that combines stakeholders with an independent board. The governance model differs between RTOs, but it can be divided into two main models: shared governance and advisory-only. In the shared governance model, RTO stakeholders and the independent Board have shared governance where both the independent board and stakeholders must approve a proposal before it goes to FERC for standard review and approval.²⁸ Under the advisory-only process, stakeholders provide input into the development of proposals, but the RTO board can independently file a proposal for standard review by FERC.²⁹ For the FERC regulated RTOs, PJM and NYISO have a shared governance model, where FERC filing rights are shared between stakeholders and the independent board.³⁰ ISO-NE, MISO, SPP, and CAISO reserve filings rights to the independent board.³¹

G. Environmental Pressures from States, FERC, and RTOs

The electrical grid is on the precipice of a massive change to accommodate the transition to a clean energy system. The physical, economic, social, and environmental threat of climate change is imposing new conditions on our energy systems that are reshaping what resources will supply our energy needs. Pressures on the RTOs to address these threats are coming from state governments, FERC, market participants and stakeholders. Each party seeks to define and shape the role of the RTO in the energy transition.

State environmental policies and energy procurement mandates are a major driver in the energy transition and a major source of pressure on RTOs. In October 2020, five of the six New England governors officially announced their support for reforming ISO-NE's electricity markets and governance to accelerate climate

see also *Introduction to NYISO*, N.Y. INDEP. SYS. OPERATOR, <https://www.nyiso.com/documents/20142/3037451/Introduction-to-NYISO.pdf/f7ad7e5c-65e9-635a-0aee-62709c33c412> (last visited July 23, 2023) (the New York Power Pool was formed in 1966); see also *About Us*, SW. POWER POOL, <https://www.spp.org/about-us> (last visited July 23, 2023) (SPP was formed in 1941).

25. *The ISO Grid*, CAL. INDEP. SYS. OPERATOR, <http://www.caiso.com/about/Pages/OurBusiness/The-ISO-grid.aspx> (last visited August 16, 2023) (CAISO's operations do extend into a small part of Nevada).

26. See Lazar, *supra* note 20, at 22.

27. *Id.*

28. Jennifer Gardner, *RTO Stakeholder Process: Principle & Best Practices*, W. RES. ADVOC. 5 (Mar. 11, 2019), <https://www.westerneim.com/Documents/Presentation-GovernancePanel-WRA.pdf>.

29. *Id.* (Under this model, technically speaking, the section 205 filing rights at FERC are shared, while in the advisory-only model, the board unilaterally has section 205 filing rights).

30. *Id.*

31. *Id.*

change mitigation efforts.³² The states sought alignment of the regional competitive energy markets with state decarbonization goals.³³ In their letter, the governors noted that the current market design does not recognize the full value of “State’s ratepayer-funded investments in clean energy resources”; that the RTO “lacks a proactive transmission planning approach” that will facilitate the development and connection of “clean, dynamic, and distributed resources”; and that the governance structure is not transparent to the states and customers it serves and its mission is not responsive to the states’ legal mandates and policy priorities.³⁴ While states can assert their request for market reforms, they are limited in their ability to introduce programs to achieve their decarbonization goals.³⁵ In *Hughes v. Talen*, the Supreme Court invalidated a Maryland proposal to compensate new generation resources because it directly interfered with the setting of wholesale electricity prices, a power exclusively reserved to FERC by the Federal Power Act.³⁶

FERC itself is putting pressures on RTOs to respond to environmental issues. FERC has the authority to initiate proceedings on its own recognizance and to respond to issues brought before it by stakeholders.³⁷ In recent years, FERC has used its powers to issue orders on battery storage, distributed resources, and demand response that required the RTOs to adjust their market rules.³⁸ In April 2021, FERC issued a policy statement that it would make a situation-specific determination if wholesale market rules incorporating a state-established carbon price would fall under FERC’s section 205 authority.³⁹ FERC has also evaluated proposals from RTOs that would affect the ability of renewable energy generation resources to participate in energy markets. For example, FERC’s consideration of a minimum offer price rule (MOPR) for new generation resources in ISO-NE, NYISO, and PJM directly addresses market participation rules for renewables.⁴⁰

32. *New England’s Regional Wholesale Electricity Markets and Organizational Structures Must Evolve for 21st Century Clean Energy Future*, NEW ENG. STATES COMM. ON ELEC. 1 (Oct. 4, 2020), http://nescoe.com/wp-content/uploads/2020/10/Electricity_System_Reform_GovStatement_14Oct2020.pdf.

33. *Id.*

34. *Id.* at 2.

35. *Hughes v. Talen Energy Mktg., LLC*, 578 U.S. 150, 162-63 (2016).

36. *Id.* at 166.

37. 16 U.S.C. § 824e(a).

38. Notice of Proposed Rulemaking, *Participation of Distributed Energy Resource Aggregations in Markets Operated by Regional Transmission Organizations and Independent System Operators*, 172 FERC STATS & REGS. ¶ 61,247, 85 Fed. Reg. 68,450 (2020); Order on Rehearing and Clarification, *Demand Response Compensation in Organized Wholesale Energy Markets*, 134 FERC ¶ 61,187 at P 2, 76 Fed. Reg. 16,658 (2011); Notice of Proposed Rulemaking, *Electric Storage Participation in Markets Operated by Regional Transmission Organizations and Independent System Operators*, 157 FERC ¶ 61,121, 81 Fed. Reg. 86522 (2016); Notice of Proposed Rulemaking, *Reform of Generator Interconnection Procedures and Agreements*, 157 FERC ¶ 61,212, 81 Fed. Reg. 4464 (2018).

39. Notice of Proposed Policy, *Carbon Pricing in Wholesale Electricity Markets*, 173 FERC ¶ 61,062 at P 4-6, 85 Fed. Reg. 66965 (2020).

40. *Order Accepting Tariff Revisions Subject to Condition*, 179 FERC ¶ 61,102 at P 10 (2022); *Letter to FERC on PJM Interconnection L.L.C., Docket No. ER21-2582-000 Revisions to Application of Minimum Offer Price Rule*, PJM 7 (July 30, 2021), <https://www.pjm.com/directory/etariff/FercDockets/6239/20210730-er21-2582-000.pdf>; *PJM MOPR Proposal Takes Effect by Notice of FERC*, PJM INSIDE LINES (Sept. 30, 2021), <https://insidelines.pjm.com/pjm-mopr-proposal-takes-effect-by-notice-of-ferc/>.

FERC's authority to modify an RTO's section 205 filing is limited. When issuing orders to address emerging issues, FERC provides broad guidance and instructions that each RTO must comply with as it develops specific changes to its tariffs and/or market rules. RTOs then develop and submit proposals to FERC for its approval. FERC is limited in its ability to modify RTO proposals filed under section 205. The U.S. Court of Appeals for the District of Columbia found that when FERC reviews a section 205 filing it may not "transform the proposal into an entirely new rate of FERC's own making."⁴¹ The ruling increases the emphasis on the filings emerging from the stakeholder governance process. Section 205 puts FERC in a "passive and reactive role" with limited options beyond accepting or rejecting proposals filed by utilities or RTOs.⁴² FERC does not have the authority "to impose a new rate scheme of its own making without the consent of the utility" or RTO that filed the original proposal.⁴³ FERC can propose modifications to a utility's proposal if it receives the consent of the utility, but that power is limited too.⁴⁴ FERC's proposal cannot involve its "own original notion of a new form of rate" or an "entirely new rate scheme."⁴⁵ FERC cannot suggest "modifications that result in an 'entirely different rate design' than the utility's original proposal or the utility's prior rate scheme."⁴⁶

RTO stakeholders and market participants have been calling for changes to RTO practices. Some stakeholders have been seeking to improve environmental outcomes and RTO markets often clash with stakeholders who are challenging RTO efforts to address environmental pressures. Two examples highlight the conflicting interests that RTOs must balance. Stakeholders and environmental advocates have called for action to resolve uneconomic dispatch practices of coal plants by vertically integrated utilities in MISO.⁴⁷ The stakeholders argue that using a "must run" status has enabled uneconomic dispatch which costs consumers hundreds of millions of dollars while providing a financial lifeline to aging coal plants.⁴⁸ The problem of uneconomic dispatch has been acknowledged by MISO's external market monitor and SPP's internal market monitor who have both issued reports on the problematic nature of self-commitment of coal generation by vertically utilities and their impact on price formation and market efficiency.⁴⁹ In a

41. *NRG Power Mktg., LLC v. FERC*, 862 F.3d 108, 110 (D.C. Cir. 2017).

42. *Advanced Energy Mgmt. All. v. FERC*, 860 F.3d 656, 656, 662 (D.C. Cir. 2017).

43. *NRG*, 862 F.3d at 109.

44. *Id.* at 114.

45. *City of Winnfield v. FERC*, 744 F.2d 871, 875-76 (D.C. Cir. 1984).

46. *NRG*, 862 F.3d at 109; *W. Res., Inc. v. FERC*, 9 F.3d 1568, 1568 (D.C. Cir. 1993).

47. Catherine Morehouse, *MISO: Majority of coal is self-committed, 12% was economic over 3-year period*, UTIL. DIVE (May 7, 2020), <https://www.utilitydive.com/news/miso-majority-of-coal-is-self-committed-12-was-uneconomic-over-3-year-pe/577508/>.

48. Jeremy Fisher et al., *Playing With Other People's Money: How Non-Economic Coal Operations Distort Energy Markets*, SIERRA CLUB (Oct. 2019), <https://www.sierraclub.org/sites/www.sierraclub.org/files/Other%20Peoples%20Money%20Non-Economic%20Dispatch%20Paper%20Oct%202019.pdf>; Joseph Daniel, *The Coal Bailout Nobody is Talking About*, THE EQUATION – UNION OF CONCERNED SCIENTISTS (Sept. 2018), <https://blog.ucsusa.org/joseph-daniel/the-coal-bailout-nobody-is-talking-about>.

49. Catherine Morehouse, *MISO integrated utilities lost \$492M from 2016-2019 via uneconomic coal dispatch: Market Monitor*, UTIL. DIVE (Oct. 2020), <https://cdn.misoenergy.org/20201008%20MSC%20Item%2004%20IMM%20Coal%20Dispatch%20Study481336.pdf>; *A Review*

separate proceeding, another MISO market participant filed a complaint with FERC seeking a ruling that MISO's tariff discriminates against demand response providers.⁵⁰ Two NYISO market participants filed a complaint against NYISO with FERC seeking an order declaring the minimum price offer floor rules are unjust, unreasonable, and unduly discriminatory and establishing a just and reasonable replacement rate.⁵¹

H. Issues Within the RTO Stakeholder Governance Process

RTOs are a significant focus of the pressures for states, FERC, and market participants and other stakeholders. An RTO's control over market rules, generator interconnection, transmission system planning, operational control and dispatch of resources makes it the critical player in efforts to integrate renewables and distributed energy resources into the electrical grid. The control also attracts pressure from states, FERC, market participants, and other stakeholders to adapt and change in response to different and sometimes competing goals and objectives.

In the past couple of years, research on the effectiveness of RTO stakeholder governance processes has identified concerns with the ability of RTOs to resolve complex issues. James et al. reported on the concerns of stakeholders that governance processes were affected by growing tension between incumbents and new entrants to the markets, the influence of the principal-agent relationship between RTO staff and RTO board members, the willingness to pursue short-term fixes over long-term solutions, and the rigid composition of stakeholder voting sectors as the profile of the market participants has changed.⁵² Someone highlighted mounting issues in PJM that the stakeholder governance processes were having in adapting to drivers of change - flat load growth, increasing renewable energy supply mandates, growth of financial transmission rates trade volumes, low priced natural gas, and capacity market design controversies.⁵³ PJM has been challenged to effectively address issues important to the economic viability of incumbent and new entrant market participants, the balance of power between stakeholders, and the allocation of financial costs and benefits.⁵⁴ A study of PJM stakeholder voting patterns by Yoo identified strong coalitions and pivotal voters that, when working

of the Commitment and Dispatch of Coal Generators in MISO, POTOMAC ECON. (Sept. 2020), https://www.potomaceconomics.com/wp-content/uploads/2020/09/Coal-Dispatch-Study_9-30-20.pdf.

50. Michael Phillis, *FERC Told Its Power Demand Rule Limits Market Access*, LAW 360 (Oct. 2020), <https://www.law360.com/energy/articles/1321631/ferc-told-its-power-demand-rule-limits-market-access>; Combined Notice of Filings, *Voltus, Inc. v. Midcontinent Indep. Sys. Operator, Inc.*, 85 Fed. Reg. 68,867 (2020).

51. Catherine Morehouse, *Gas generators ask FERC to apply PJM MOPR logic to NYISO*, UTIL. DIVE (Oct. 2020), <https://www.utilitydive.com/news/gas-generators-ask-ferc-to-apply-pjm-mopr-logic-to-nyiso/587138/>; Notice, *Cricket Valley Energy Center, LLC. v. N.Y. Indep. Sys. Operator, Inc.*, 85 Fed. Reg. 66,964 (2020).

52. Mark James et al., *How the RTO Stakeholder Process Affects Market Efficiency*, R STREET (Oct. 5, 2017), <https://www.rstreet.org/research/how-the-rto-stakeholder-process-affects-market-efficiency/> [hereinafter R STREET].

53. Christina Simeone, *PJM Governance: Can Reforms Improve Outcomes*, KLEINMAN CTR. FOR ENERGY POL'Y 16 (May 9, 2017), <https://kleinmanenergy.upenn.edu/research/publications/pjm-governance-can-reforms-improve-outcomes/>.

54. *Id.* at 31.

in concert under PJM's sector-weighted voting rules, could limit the ability of the governance process to pass reforms to market rules or operational rules.⁵⁵ Relatedly, Yoo and Blumsack modeled how decision processes for establishing RTO market rules can materially affect market outcomes and investment incentives, such as capacity market reforms.⁵⁶

With markets tasked to address environmental issues with economic and non-economic impacts, there is value in exploring how environmental advocates participate in today's governance process as well as options for enhancing effective participation. The remainder of this article analyzes the substantive and procedural rights afforded to eNGOs to contribute their perspective in each RTO's tariff and governing documents.

II. SECTION II

A. RTO eNGO Participation

1. NYISO

NYISO is a single state ISO operating in New York State.⁵⁷ NYISO's three membership categories are market participants, non-market participants and non-voting entities.⁵⁸ eNGOs, consumer advocacy organizations, and government agencies fall into the non-market participant category.⁵⁹ As of July 2023, there are twenty-seven generation owner members, thirty-five other supplier members, fourteen end use consumers members, nineteen public power and environmental party members (six of which are environmental), and fifty-two non-voting entity members.⁶⁰

NYISO employs a shared governance model where stakeholders vote to advance proposed rule changes to the board.⁶¹ Market rule changes must be approved by 58% of stakeholders before the rule can be advanced to the board of

55. Kyungjin Yoo, *Voting Behavior in PJM Regional Transmission Organization*, PA STATE UNIV. 9 (June 2016), https://usae.org/aws/USAEE/asset_manager/get_file/527966?ver=0.

56. Seth Blumsack & Kyungjin Yoo, *RTO Governance Structures can Affect Capacity Market Outcomes*, 53RD HAW. INT'L CONF. ON SYS. SCI. 3091 (2020) (In general Yoo and Blumsack found that the current voting system had difficulty passing market rule changes for contentious issues like capacity market reform. The material effects included failure to pass rules which would reduce capacity market prices and lower PJM's installed capacity margin).

57. *Frequently Asked Questions*, NYISO, <https://www.nyiso.com/faq> (last visited Sept. 11, 2023).

58. *New York Independent System Operator Agreements*, NYISO § 2.02 (Mar. 5, 2013), <https://www.nyiso.com/documents/20142/1399438/iso-agreement.pdf/67c82172-de39-f855-c29e-e04e32e81285?t=1553789716713> [hereinafter *NYISO Agreements*].

59. *Id.*

60. *2023 Parties to the Agreement*, NYISO (2023), <https://www.nyiso.com/documents/20142/1408883/2023-Committee-Membership-Roster.pdf/6311ae12-4032-f75c-821b-78d056788505>.

61. *Shared Governance: How Our Stakeholders Have a Voice in Shaping the Electric Grid*, NYISO (Mar. 27, 2019), <https://www.nyiso.com/-/shared-governance-how-the-new-york-iso-gives-stakeholders-a-voice-in-shaping-the-future-of-the-electric-grid>.

directors.⁶² Vote allocations are preserved for each committee.⁶³ The three committees that Members can join are the Management Committee, Operating Committee, and Business Issues Committee.⁶⁴ NYISO has a weighted-sector voting system in each of its committees.⁶⁵ Generation Owners receive 21.5% of the vote, Transmission Owners receive 20%, End-Use Consumers receive 20%, Other Suppliers receive 21.5%, and Public Power and Environmental Parties receive 17%.⁶⁶ Work is done at the committee level and through associated subcommittees and working groups.⁶⁷ Sector-weighted voting is limited to votes taken in committee as the subcommittees and working groups work by consensus.⁶⁸ Governance sector members in each committee include generation owners, other suppliers, transmission owners, public power and environmental parties, end-use consumers, and non-voting entities.⁶⁹

There are two formal participation opportunities for eNGOs in NYISO's governance process. First, an eNGO can become a governance sector member in the public power and environmental parties group, but the eNGO must be certified by the NYISO Board of Directors⁷⁰ and pay a \$100 annual fee.⁷¹ Most members must pay an annual fee of \$5,000; however, that fee is reduced for small consumers and not-for-profit organizations, which only pay \$100 annually.⁷² The Public Power and Environmental Parties sector holds 17% of the stakeholder votes. However, eNGOs can only receive 2% of the total votes in each committee and that vote percentage is capped at 2% even when other members of the sector are not exercising their full voting rights.⁷³ State Public Power Authorities and Municipal Electric Systems and Cooperatively Owned Electric Systems of the Public Power and Environmental Parties groups receive 8% and 7% of the allocated voting rights.⁷⁴ Each committee is supposed to meet monthly where an eNGO may "request that additional or supplemental information or documentation be disseminated by ISO personnel and/or through ISO communications media, including, but not limited to, the ISO site on the world wide web."⁷⁵ The Management Committee, which includes representatives from each market sector, is responsible for searching for and recommending potential directors to the Board.⁷⁶ The second way an eNGO can participate in the process is by becoming a non-voting entity

62. *NYISO Agreements*, *supra* note 58, § 7.10.

63. *Id.* §§ 8.03, 9.

64. *Id.* § 4.

65. *Id.* § 7.06.

66. *NYISO Agreements*, *supra* note 58, §§ 7.06(a), 8.03, 9.02.

67. *Id.* § 4.

68. *Id.* § 2.02.

69. *Id.* §§ 7.04, 8.03, 9.02.

70. *NYISO Agreements*, *supra* note 58, § 2.02.

71. *Id.*

72. *Id.*

73. *NYISO Agreements*, *supra* note 58, §§ 7.06(e)(iii), 8.03, 9.02.

74. *Id.*

75. *NYISO Agreements*, *supra* note 58, §§ 7.11, 8.03, 9.02.

76. *Bylaws of the New York Independent System Operator, Inc.*, art. III, section 2 (2017), https://www.nyiso.com/documents/20142/1399438/By_Laws_NYISO_2017.pdf.

member.⁷⁷ These members can still join committees, take part in committee meetings, and present issues to the committees, but they have no voting rights.⁷⁸ A non-voting entity member still pays \$100 annual fee and must “have a significant interest in a sector but do not qualify for membership in that sector or qualify for membership in a sector but choose not to join that sector.”⁷⁹ Non-members are allowed to attend committee meetings, but not allowed to participate.⁸⁰

The final informal opportunity for an eNGO to participate in the NYISO governance process is through the Environmental Advisory Council (EAC) of NYISO.⁸¹ The EAC, which was formed in 2005, consists of ten members who advise the President of NYISO on the environmental implications of NYISO activities.⁸² In NYISO, membership on the EAC is done by invitation only, with members invited to join because of their experience working on issues that cut across the environment and the energy industry.⁸³ The EAC is not a body that represents stakeholders; it is a body that continues to provide advice to NYISO.⁸⁴ eNGOs and other public interest groups can attend meetings, but they do not have guaranteed slots on the EAC.⁸⁵ NYISO’s EAC provides advice to the President of NYISO on specific issues raised by the ISO.⁸⁶ EAC’s purpose is to “provide guidance, as requested, on identifying, evaluating and remedying, as necessary, the environmental implications of existing or planned activities regarding: market design; system operations and reliability; electric system planning; strategic planning; and such other initiatives as may arise.”⁸⁷ The EAC holds bi-annual meetings which are open to market participants and non-market participants like state agencies may also participate in meetings.⁸⁸ EAC meetings are split between closed sessions and open sessions where members of the public can attend and participate.⁸⁹ In NYISO, EAC meetings are attended by staff and by a member of the Board of Directors, which telegraphs to the staff that this is a body supported by the board and that the information and discussions generated by the EAC are

77. *NYISO Agreements*, *supra* note 58, § 2.02.

78. *Id.*

79. *Id.*

80. *Bylaws of The Business Issue Committee of the New York Independent System Operator*, NYISO § 4.16 (2017), https://www.nyiso.com/documents/20142/1399438/By_Laws_NYISO_2017.pdf.

81. *Environmental Advisory Council Charter*, NYISO (2017), <https://www.nyiso.com/documents/20142/1397146/EAC-Charter.pdf> [hereinafter *NYISO EACC*].

82. *Id.*

83. *How Our Environmental Advisory Council Adds a Clean Perspective to NYISO Decisions*, NYISO BLOG (Nov. 17, 2021), <https://www.nyiso.com/-/how-our-environmental-advisory-council-adds-a-clean-perspective-to-nyiso-decisions> [hereinafter *NYISO BLOG*].

84. *NYISO EACC*, *supra* note 81.

85. *Role of the Environmental Advisory Council*, NYISO, https://www.nyiso.com/documents/20142/1397146/role_env_council.pdf. (Last visited Sept. 22, 2023) [hereinafter *NYISO REAC*].

86. *Id.*

87. *Environmental Advisory Council Mission Statement*, NYISO, https://www.nyiso.com/documents/20142/1397146/mission_statement.pdf/95d2df75-9a90-9dca-8316-18b518e710ce?t=1539227065217 (last visited Sept. 22, 2023).

88. *NYISO REAC*, *supra* note 85.

89. *Id.*

valuable to the board.⁹⁰ The General Counsel of the ISO also participates in EAC meetings which reinforces the importance of the discussions.⁹¹ In NYISO, EAC agendas are developed by the ISO often with experts brought in to educate EAC members and to facilitate deeper discussions.⁹²

2. PJM

PJM is a multi-state RTO operating in thirteen states and the District of Columbia.⁹³ PJM, like NYISO, uses the shared governance model where market rule changes must receive stakeholder or member approval before the rules are presented to a board of managers.⁹⁴ Rules are developed and flow through PJM's committee structure. There are Senior Standing Committees, Standing Committees, and subcommittees and task forces under each Standing Committee.⁹⁵ The two Senior Standing Committees are the Members Committee and the Markets and Reliability Committee, which reports to the Members Committee.⁹⁶ The three Standing Committees are the Operating Committee, the Planning Committee, and the Markets Implementation Committee.⁹⁷ In total, there are more than forty-five committees, subcommittees, taskforces, and forums.⁹⁸

The Senior Standing Committees (Members Committee and the Markets and Reliability Committee) consist of five sectors: Generation Owners, Other Suppliers, Transmission Owners, Electric Distributors, and End-Use Customers.⁹⁹ Each Voting in these committees shall have one vote.¹⁰⁰ Each Member can appoint a representative to represent that Member in the Standing Committees as well as three alternate representatives.¹⁰¹ For the Members Committee, quorum is met when a majority of the Voting Members from each of at least three sectors are present, but if a sector has more than twenty Voting Members only ten Voting Members need to be present.¹⁰² Quorum is only needed for the Members Committee.¹⁰³ In the Senior Standing Committees, each sector receives one vote and each Voting Member receives one vote within the sector.¹⁰⁴ To pass a pending motion in the Senior Standing Committees, the sum of affirmative sector votes

90. NYISO BLOG, *supra* note 83, at 2.

91. *Id.*

92. *Id.*

93. *About PJM: Who We Are*, PJM 1, <https://www.pjm.com/about-pjm> (last visited Sep. 16, 2023).

94. R STREET, *supra* note 52, at 4.

95. *PJM Manual 34: PJM Stakeholder Process*, PJM § 5.1 (Jan. 25, 2023), <https://www.pjm.com/~media/documents/manuals/m34.ashx> [hereinafter *PJM Manual*].

96. *Id.*

97. *Id.*

98. *Committee Structure Diagram*, PJM, <https://www.pjm.com/-/media/committees-groups/committee-structure-diagram.ashx> (last visited July 19, 2023).

99. *Amended and Restated Operating Agreement of PJM Interconnection, L.L.C.*, PJM INTERCONNECTION, LLC, § 8.1.1 (July 14, 2011), <https://pjm.com/directory/merged-tariffs/oa.pdf> [hereinafter *PJM Operating Agreement*].

100. *Id.*

101. *Id.* § 8.2.

102. *Id.* § 8.3.3.

103. *PJM Operating Agreement*, *supra* note 99, § 8.3.3.

104. *Id.* § 8.4(b)

“shall be greater than (but not merely equal to) the product of .667 multiplied by the number of sectors that have at least five Members and that participated in the vote.”¹⁰⁵ Once passed, the motion is presented to the Board of Managers.

PJM membership is not available to environmental organizations. To qualify as a PJM Member, an applicant must (a) be a transmission owner, generation owner, other supplier, electric distributor, or end-use customer, (b) accept all obligations in the PJM Operating Agreement, and (3) pay all the necessary fees.¹⁰⁶ All voting members pay an annual fee of \$5,000 and market participants pay an application fee of \$2,000 plus a \$1,500 risk policy review fee.¹⁰⁷ Membership applications are submitted to the President of PJM for approval.¹⁰⁸ Stakeholders can also become an Associate Member if the party does not qualify as a Member.¹⁰⁹ Associate Members pay half the annual membership, the application fee is waived, may participate in all stakeholder processes, and participate in trainings offered by PJM, but these members shall not vote in stakeholder activities, working groups, or committees.¹¹⁰ No annual fee affiliate membership is available for families of companies operating in PJM.¹¹¹ Affiliate members can vote at senior task force or lower level standing committee meetings.¹¹² There are no environmental groups in any PJM membership category.¹¹³ In PJM, prospective board members are identified by an eight-person Nominating Committee which is made up of representatives from each of the five stakeholder sectors and three current Board members.¹¹⁴

Environmental organizations do participate at PJM as user group members. Under PJM’s operating agreement, five or more Members can form a User Group.¹¹⁵ The Operating Agreement required that the Members Committee create a User Group comprised of “bona fide public interest and environmental organizations.”¹¹⁶ This is one opportunity for eNGOs to be involved in the PJM governance process. Under PJM’s operating agreement, meetings of User Groups shall be open to all Members and to the Office of the Interconnection.¹¹⁷ PJM has a single user group, the Public Interest and Environmental Organization User Group

105. *Id.* § 8.4(c)

106. *Id.* § 11.6(a)

107. *Membership Enrollment*, PJM, <https://www.pjm.com/about-pjm/member-services/membership-enrollment.aspx> (last visited July 24, 2023).

108. *PJM Operating Agreement*, *supra* note 99, § 11.6(c).

109. *Id.* § 11.7(a)

110. *Id.* § 11.7(b)

111. *Membership & Sector Selection*, PJM 2, <https://www.pjm.com/about-pjm/member-services/membership-and-sector-selection.aspx> (last visited July 24, 2023).

112. *Id.*

113. *Member List*, PJM, <https://www.pjm.com/about-pjm/member-services/member-list.aspx> (last visited Sept. 13, 2023).

114. *The PJM Board of Managers Maintains RTO’s Independence*, PJM (2023), <https://www.pjm.com/-/media/about-pjm/newsroom/fact-sheets/pjm-board-nominations-fact-sheet.ashx>.

115. *PJM Operating Agreement*, *supra* note 99, § 8.7.

116. *Id.* at § 8.7(b).

117. *Id.* at § 8.7(c).

(PIEOUG).¹¹⁸ PIEOUG is further divided as it contains both an Environmental and Public Interest Chair and a Consumer Advocates Chair.¹¹⁹ The purpose of PIEOUG is to provide access to the stakeholder process for organizations that are otherwise not eligible for membership.¹²⁰ Membership is limited to “bona fide” public interest and environmental organizations that are interested in PJM activities.¹²¹ Certain organizations are explicitly identified as being ineligible for PIEOUG membership. Non-eligible entities include PJM Members other than consumer advocates; any organization eligible for PJM membership except consumer advocates and those who are eligible for membership in the End Use Customer sector or as an Affiliate Member only as an incidental result of their status as a retail electric consumer; organizations substantially funded by a PJM Member; and organizations whose primary mission is furthering the interests of other PJM members except CAPS.¹²² The user group has sixty-three members, of which twenty-nine are voting members and the remainder are affiliate members. Voting members include Environmental Defense Fund, Earthjustice, Natural Resources Defense Council, while the affiliate members are primarily connected to utilities and generators operating in the PJM area.¹²³

Although meetings are open to any participant who is eligible to attend a PJM stakeholder meeting, voting rights are only allocated to active PIEOUG members.¹²⁴ In PJM, the meeting agenda is developed by the members; non-members are allowed to attend and participate, but their participation can be curtailed by the Chair.¹²⁵ PIEOUG is granted the right to make an annual presentation directly to the Board of Managers at the Annual meeting.¹²⁶ The three-hour time slot granted to PIEOUG is split between environmental groups and consumer advocates.¹²⁷ The PIEOUG also has the right to submit, upon an affirmative vote of three-fourths or more of the members, any recommendation or proposal for action to the Chair of the Members Committee.¹²⁸ The Chair must refer the matter for consideration by the applicable Standing Committee for a recommendation to the Members Committee.¹²⁹ “If the Members Committee does not adopt a recommendation or proposal submitted by [PIEOUG], then upon a vote of nine-tenths or more of the

118. *User Groups*, PJM, <https://www.pjm.com/committees-and-groups/user-groups.aspx> (last visited July 10, 2023).

119. *PJM Public Interest Environmental Organization Users Group Charter*, PJM (2021), <https://www.pjm.com/-/media/committees-groups/user-groups/pieoug/2021/20210105/20210105-charter-clean.ashx> [hereinafter *PIEOUGC Charter*].

120. *Id.* at 1.

121. *PJM Operating Agreement*, *supra* note 99, § 8.7(b).

122. *PIEOUGC Charter*, *supra* note 119, § 3(18) (2021)

123. *Public Interest & Environmental Organizations User Group*, PJM, <https://www.pjm.com/committees-and-groups/user-groups/pieoug> (last visited Sept. 16, 2023).

124. *PIEOUGC Charter*, *supra* note 119, § 2(11), (13).

125. *Id.* § 4(21).

126. *Id.* § 4(22).

127. *Id.*

128. *PIEOUGC Charter*, *supra* note 119, at Appendix 2.

129. *Id.*

members, the recommendation or proposal can be submitted directly to the PJM Board for its consideration.”¹³⁰

The final way that eNGOs can participate in the PJM governance process is by attending Member Stakeholder meetings. Under PJM’s rules, stakeholder meetings are open to the public unless otherwise noted, but there are limitations on sharing information from brainstorming sessions, creating recordings or transcriptions of meetings, and broadcasting the meetings.¹³¹

3. MISO

MISO is a multi-state ISO operating in fifteen Midwestern states and the Canadian province of Manitoba.¹³² Section 205 filing rights are jointly held between MISO, the transmission owners, and the Organization of MISO States (OMS), but it is not a shared governance model as stakeholders provide advice to MISO but hold no section 205 filing rights.¹³³ Transmission owners retain sole filing authority for transmission rate designs in its territory and capital investment recovery exclusively from its customers, but transmission owners share authority when the costs are distributed across multiple transmission footprints.¹³⁴ OMS holds section 205 filings rights for cost allocation.¹³⁵

MISO is the only RTO that has an exclusive environmental organization-only stakeholder group. In MISO, there are three types of participation groups: Stakeholders, Market Participants, and Members.¹³⁶ Any person or group with an interest in the MISO process can become a stakeholder and stakeholders and market participants can become members.¹³⁷ Market Participants are companies certified by MISO to participate in its energy markets.¹³⁸ A certified Market Participant can submit bids to purchase energy, submit offers to supply energy and operating reserve, hold financial transmission rights and auction revenue rights, and other market related activities.¹³⁹ Market Participant applications must demonstrate that they are an “appropriate person” which is accomplished by producing evidence of sufficient financial reserves or access to credit.¹⁴⁰ However, not all stakeholders

130. *Id.*

131. *PJM Manual*, *supra* note 95, § 4.5.

132. *About MISO: Operating the power grid, managing the energy markets, planning the future grid*, MISO 1, <https://www.misoenergy.org/about/> (last visited Sept. 18, 2023).

133. R STREET, *supra* note 52, at 4.

134. *Id.* at 4-5.

135. *Agreement of Transmission Facilities Owners to Organize the Midcontinent Independent System Operator, Inc., Delaware Non-Stock Corporation*, MISO Appendix K § E.3 (Nov. 19, 2013), [https://cdn.misoenergy.org/MISO%20TOA%20\(for%20posting\)47071.pdf](https://cdn.misoenergy.org/MISO%20TOA%20(for%20posting)47071.pdf) [hereinafter *Agreement of Transmission Facilities*].

136. *Stakeholder Governance Guide*, MISO 5-6 (May 17, 2023), <https://cdn.misoenergy.org/Stakeholder%20Governance%20Guide105455.pdf> [hereinafter *SGG*].

137. *Id.*

138. *Market Participation Registration*, MISO, <https://www.misoenergy.org/markets-and-operations/market-participation/#t=10&p=0&s=FileName&sd=asc> (last visited July 24, 2023).

139. *Id.*

140. *Minimum Participation Requirements*, MISO 1, <https://cdn.misoenergy.org/Minimum%20Participation%20Requirements70105.pdf> (last visited July 24, 2023).

can become members. Members are a person or business entity which is an Eligible Customer or Owner.¹⁴¹ An Eligible Customer may be any electric utility, Market Participant, Federal Power Marketing Agency, or any person generating electric energy for sale or resale.¹⁴² An Owner is a “utility or other entity which owns, operates, or controls facilities for the transmission of electricity in interstate commerce.”¹⁴³ Members can join MISO upon an approved application by the Chief Executive Officer or President and the payment of membership fees.¹⁴⁴ Members pay an initial fee of \$15,000 and an annual fee each year thereafter of \$1,000.¹⁴⁵ Being a Member entitles a company or organization to vote to elect the members of the Board of Directors in addition to enjoying the full rights of a stakeholder.¹⁴⁶

MISO has eleven stakeholder groups.¹⁴⁷ The stakeholder groups are Transmission Owners; Municipal and Cooperative Electric Utilities and Transmission-Dependent Utilities; Independent Power Producers and Exempt Wholesale Generators; Power Marketers; Eligible End-Use Customers; State Regulatory Authorities; Public Consumer Advocates; Environmental; Coordination Members; Competitive Transmission Developers; and Affiliates.¹⁴⁸ Of the eleven stakeholder groups, three are excluded from becoming Members: Public Consumer Advocates, State Regulatory Authorities, and Environmental Advocates of the Advisory Committee which prevents them from being able to vote on matters pertaining to the MISO Board.¹⁴⁹ As of July 2023, there are eleven members of the environmental stakeholder group.¹⁵⁰

MISO stakeholder group vote allocations vary depending upon the committee. There are four senior committees in MISO that report directly to the Board of Directors: Owners Committee, Advisory Committee, OMS Committee, and the Alternate Dispute Resolution Committee.¹⁵¹ Stakeholder participation occurs on the Advisory Committee and the Planning Advisory Committee.¹⁵² The Planning Advisory Committee operates as a subcommittee to the Advisory Committee.¹⁵³ Each of the eleven stakeholder groups are represented on these committees and

141. *Agreement of Transmission Facilities*, *supra* note 135, at section I, K.

142. *MISO's Tariff*, MISO 2, [https://cdn.misoenergy.org/Guide to MISO Region Engagement476181.pdf](https://cdn.misoenergy.org/Guide%20to%20MISO%20Region%20Engagement476181.pdf) (last visited, July 24, 2023).

143. *Agreement of Transmission Facilities*, *supra* note 135, at section I, P.

144. *Id.* at section V, A, 1.

145. *Id.* at Article Six.

146. *Id.* at Appendix F, section 4.3.

147. *MISO Region Engagement*, MISO, <https://www.misoenergy.org/stakeholder-engagement/miso-engagement/> (last visited Sept. 22, 2023).

148. *SGG*, *supra* note 136, at 9.

149. *Membership Application for Non-Transmission Facilities Owner*, MISO 1, n.1, <https://cdn.misoenergy.org/Non-Transmission%20Owners%20Membership%20Application92000.pdf> (last visited Sept. 22, 2023).

150. *Stakeholder Group Participation*, MISO 8, section VIII. (June 15, 2023), <https://cdn.misoenergy.org/Stakeholder%20Group%20Participation95902.pdf> (last visited July 10, 2023).

151. *MISO Board of Directors*, MISO, <https://cdn.misoenergy.org/Entity%20Org%20Chart67933.pdf> (last visited Sept. 22, 2023).

152. *Planning Advisory Committee (PAC) CHARTER*, MISO 1, <https://cdn.misoenergy.org/2023%20PAC%20Charter628872.pdf> (last visited Sept. 22, 2023).

153. *Id.* at 2.

given sector-weighted voting rights.¹⁵⁴ The Advisory Committee reports to the Board and consists of twenty-five representatives with assigned seats and votes.¹⁵⁵ Two representatives are to be from the environmental stakeholder group in which one seat is assigned to a Member who was a member of Mid-Continent Area Power Pool (MAPP) as of March 1, 2020 or a Member “who is actively involved in the MAPP region.”¹⁵⁶ The MAPP was the regional reliability council that existed prior to the formation of MISO and it was replaced by the Midwest Reliability Organization.¹⁵⁷ There needs to be 25% of members present for quorum, and a vote of majority shall control.¹⁵⁸ The Advisory Committee can raise concerns to MISO and the Board, but it shall not exercise control over MISO or the Board.¹⁵⁹ The two environmental representatives are chosen by the environmental stakeholder organizations, but the Board must certify the environmental stakeholder organizations to participate in the representative selection process.¹⁶⁰ The Board is not supposed to unreasonably withhold certification.¹⁶¹ The Planning Advisory Committee is comprised of one representative from each of the eleven stakeholder groups.¹⁶² Stakeholders can participate in the subcommittees and working groups under the Advisory Committee.¹⁶³ Meetings of the Committees and Board shall be open to the public, materials from the meetings shall be posted to MISO’s website, and any party can provide written and/or oral comments at the meetings.¹⁶⁴

4. ISO-NE

ISO-NE is a multi-state RTO operating in Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont.¹⁶⁵ ISO-NE’s governance structure is unique amongst RTOs. The Board of Directors retains section 205 filing rights for market rules, but stakeholders can force ISO-NE to file alternative market rules with FERC, known as the “jump ball.”¹⁶⁶

ISO-NE has several layers of committees, which play an advisory role to ISO-NE unless expressed agreed upon NEPOOL and the ISO.¹⁶⁷ The primary stakeholder advisory body is the Participants Committee, which consists of

154. *Id.* at 1.

155. *Agreement of Transmission Facilities*, *supra* note 135, art. 2, § VI(A)(1).

156. *Id.*

157. *Mid-Continent Area Power Pool Load and Capability Report*, MAPP CENTER § I-3, (May 1, 2007), <https://nocapx2020.info/wp-content/uploads/2007/12/lc-2007-final-mapp.pdf>.

158. *Agreement of Transmission Facilities*, *supra* note 135, art. 2, § V(B)(5).

159. *Id.* at art. 2, § VI(A)(1).

160. *Id.* at art. 2, § VI(A)(2)(b).

161. *Id.*

162. *Agreement of Transmission Facilities*, *supra* note 135, app. B, § 2.

163. *Id.* at art. 2, § VII(A).

164. *Id.*

165. *Participants Agreement among ISO New England Inc. as the Reg’l Transmission Org. for New England and the New England Power Pool and the entities that are from time to time parties hereto constituting the Individual Participants*, ISO-NE, § 11.1.5 (Apr. 1, 2023) [hereinafter *ISO-NE Participants Agreement*].

166. *Id.*

167. *Id.* § 8.5.

NEPOOL Participants.¹⁶⁸ Under the Participants Committee are several Standing Technical Committees: “the Markets Committee, the Reliability Committee, and the Transmission Committee.”¹⁶⁹ Together these committees make up the Principal Committees.¹⁷⁰ The Participants Committee or Technical Committee can form other committees, subcommittees, task forces, and working groups under each committee.¹⁷¹ Even though the committees play mainly an advisory role to ISO-NE, if a market rule receives 60% or more vote from the Participants Committee, then ISO-NE must file the alternate market-rule proposal to FERC.¹⁷² FERC receives the ISO-NE proposal and the Participant Committee’s proposal and must decide between them, which is why this process is known as the “jump ball.”¹⁷³

The main parties in the ISO-NE governance process are the ISO, NEPOOL Participants, and Individual Participants.¹⁷⁴ NEPOOL Participants and Individual Participants are both considered Governance Participants.¹⁷⁵ NEPOOL Participants are current and future parties to Second Restated New England Power Pool Agreement.¹⁷⁶ An Individual Participant is “an entity that meets the requirements for” NEPOOL participation but does not wish to become an official NEPOOL Participant.¹⁷⁷ Individual Participants can attend and take part in all committee and NEPOOL meetings, but they may not vote or take part in a sector.¹⁷⁸ Individual Participants must sign the Participants Agreement and pay the application fee and annual fees that NEPOOL Participants also pay.¹⁷⁹ The application fees are \$500 for an End User Participant, \$1,000 for an Alternative Resources applicant, and \$5,000 for all other applicants.¹⁸⁰ Annual fees range between \$500 to more than \$5,000 based upon if the participant is a NEPOOL Participant or an Individual Participant and the participant’s sector type.¹⁸¹

Participants can join one of six sectors. The six sectors within the Principal Committees are the Generation Sector, Transmission Sector, Supplier Sector, Alternative Resources Sector (three subsectors for Renewable Generation, Distributed Generation, and Load Response), Publicly Owned Entity Sector, and End Use Sector.¹⁸² Each NEPOOL Participant shall belong to only one of the six sectors and have only one voting member in the principal committees.¹⁸³ A vote in any

168. *Id.* § 7.2.

169. *ISO-NE Participants Agreement, supra* note 165, § 8.2.1.

170. *Id.* § 1.1.

171. *Id.* § 8.2.1.

172. *Id.* § 11.1.5.

173. *ISO-NE Participants Agreement, supra* note 165, § 11.1.5.

174. *Id.* §§ 6.1-6.3.

175. *Id.* § 1.1.

176. *Id.*

177. *ISO-NE Participants Agreement, supra* note 165, § 6.3.1.

178. *Id.* §§ 6.3.1, 7.2.

179. *Id.* §§ 6.3.1, 6.3.3.

180. *Id.* § 6.3.3.

181. *Second Restated NEPOOL Agreement*, NEPOOL § 14 (Jun. 25, 2019), https://www.iso-ne.com/static-assets/documents/2015/01/op_2d_rna.pdf.

182. *ISO-NE Participants Agreement, supra* note 165, §§ 7.2, 7.3.2.

183. *Id.* § 7.3.1.

of the Principal Committees must have quorum, which is met by a majority of the sectors present.¹⁸⁴ Any matter to be voted on is considered a motion and must have “equal or greater than two-thirds of the aggregate Sector Voting Shares” to pass in which each sector has one vote.¹⁸⁵ Membership on the Participants Committee entitles an entity to weigh in on the endorsement of proposed nominees for the ISO Board of Directors.¹⁸⁶

eNGOs can join the End Use Sector and receive voting privileges. The End Use Sector includes End User Participants and End User Organizations.¹⁸⁷

An End User Participant means

[A] NEPOOL Participant which is (a) a consumer of electricity in the New England Control Area that generates or purchases electricity primarily for its own consumption, (b) a non-profit group representing such consumers, (c) a Government Entity, or (d) a Related Person of another End User Participant and which (i) is licensed as a competitive supplier under the statutes and regulations of the state in which the End User Participant which is its Related Person is located and (ii) participates in the New England Market solely to serve the load of the End User which is its Related Person.¹⁸⁸

An End User Organization includes “an End User Participant which is (a) a registered tax-exempt non-profit organization with (i) an organized board of directors and (ii) a membership (A) of at least 100 Entities that buy electricity at wholesale or retail in the New England states.”¹⁸⁹ As of July 2023, there are thirty-eight voting members in the End Use Sector and forty-five companies represented.¹⁹⁰ Some of the current eNGOs in the End Use Sector include Conservation Law Foundation, Environmental Defense Fund, Natural Resources Defense Council, and the Union of Concerned Scientists.¹⁹¹

An eNGO can join the Environmental Advisory Group (EAG), which is a subgroup of the Planning Advisory Committee (PAC).¹⁹² The EAG is an open stakeholder forum that assists the Planning Advisory Committee, the Reliability Committee, and the Power Supply Planning Committee and the ISO.¹⁹³ The EAG was constituted to assist the committees and the RTO in understanding how state and federal environmental requirements will affect operation of the region’s power system and the environmental consequences of the operation of the power system

184. *Id.* § 8.3.6.

185. *Id.* § 8.3.7.

186. *Participants Committee*, ISO-NE, <https://www.iso-ne.com/committees/participants/participants-committee> (last visited Aug. 4, 2023).

187. *AMENDMENT NO. 6 TO PARTICIPANTS AGREEMENT*, ISO-NE (Jan. 4, 2011), https://www.iso-ne.com/static-assets/documents/2015/10/pa_amendments_composite_10_2015.pdf.

188. *Id.* § 1.3.

189. *Id.* § 1.2.

190. *NEPOOL Participants by Sector with Related Persons*, NEPOOL 15-16 (Sep. 1, 2020) https://ne-pool.com/uploads/C-Sector_Roster.pdf.

191. *Id.*

192. *Environmental Advisory Group*, ISO-NE 1, <https://www.iso-ne.com/committees/planning/environmental-advisory/> (last visited July 10, 2023) [hereinafter ISO-NE].

193. *Id.*

and to identify and evaluate the environmental impacts of current and future electricity generation, transmission operations, and planning activities in the RTO.¹⁹⁴ “EAG meetings are public, and any entity” can designate a member to the EAG.¹⁹⁵ The PAC and EAG are not one of the Principal Committees so there are no voting rights in these groups. EAG membership is open to members of all five stakeholder sectors with no specific rights reserved for public interest or environmental organizations.¹⁹⁶ Any stakeholder can designate a member to EAG as well as can state agencies, local governments, retail customers, public interest groups, and consultants.¹⁹⁷ As of July 2023, there are twenty-six EAG members including NGOs such as Conservation Law Foundation and Green Berkshires, Inc.¹⁹⁸

5. SPP

SPP operates a multi-state RTO connecting Manitoba, Canada to New Orleans, Louisiana. SPP uses an advisory-only governance model where the Board of Directors retains section 205 filing rights.¹⁹⁹ Membership in SPP is voluntary, but is “open to any electric utility, Federal Power Marketing Agency, transmission service provider, any entity engaged in the business of producing, selling and/or purchasing electric energy for resale, and any entity willing to meet the membership requirements” and “any entity eligible to take service under the SPP OATT.”²⁰⁰

SPP governance practices divide members in into different groups depending upon the committee. In the Members Committee and the Markets and Operations Policy Committee (MOPC), members are divided into two sectors (Transmission Owning and Non-Transmission Owner/Transmission Using) that vote on actions.²⁰¹ Each sector will vote resulting in a percent of approving votes for that sector.²⁰² For an action to pass the average of the two percentages in the two sectors must be at least 66%.²⁰³ The Members Committee works with the Board of Directors to manage and direct the SPP.²⁰⁴ It includes twenty four representatives of which six are IOU Members, five are cooperative Members, two are municipal Members, three are independent power producers/marketers Members, one is a Federal Power Marketing Agency Member, two are alternative power/public interest Members, one is an independent transmission company Member, one is a

194. *Id.*

195. *Id.*

196. ISO-NE, *supra* note 192.

197. *Id.*

198. *Participants Directory: Committee Details: Environmental Advisory Group*, ISO-NE, <https://www.iso-ne.com/participate/participant-asset-listings/directory?id=21&type=committee> (last visited Sept. 12, 2023).

199. R STREET, *supra* note 52, at 4.

200. *Southwest Power Pool Governing Documents Tariff*, SW. POWER POOL, INC., § 2.1, (Nov. 8, 2022), <https://www.spp.org/documents/13272/current%20bylaws%20and%20membership%20agreement%20tariff.pdf> [hereinafter SW. POWER POOL, INC.].

201. *Id.* § 3.9.1.

202. *Id.*

203. *Id.*

204. SW. POWER POOL, INC., *supra* note 200, § 5.1.

large retail customer Member, and one is a small retail customer Member.²⁰⁵ To qualify as a representative in the Members Committee, the representative “must be an officer or employee of a Member” and “must be the Member’s representative to the Membership” group.²⁰⁶ Representatives are “nominated by the Corporate Governance Committee and elected” by the Members.²⁰⁷ The Members Committee is only allowed to meet with the Board of Directors.²⁰⁸ The MOPC, through its designated organizational groups, develops and recommends policies and procedures related to the technical operations of SPP.²⁰⁹ Every SPP Member appoints a representative to the MOPC and eNGOs are eligible to hold one or both alternative power/public interest slots.²¹⁰ Members of the Board of Directors are nominated by the Corporate Governance Committee and elected by Members.²¹¹ The Corporate Governance Committee consists of eleven members including one representative for the alternative power/public interest Members.²¹²

For other committees and groups, membership numbers and composition vary according to the committee. For example, the Strategic Planning Committee is comprised of up to fourteen members with up to four representatives (but no less than three) from the Board of directors, five representatives from the Transmission Owning Member sector as nominated by the Corporate Governance Committee, and five representatives from the Transmission Using Member sector as nominated by the Corporate Governance Committee.²¹³ The Corporate Governance Committee is comprised of up to eleven members with representatives selected by the different Member groups.²¹⁴ Representatives are selected by investor owned utilities Members; co-operative Members; municipals Members; independent power producers/marketers Members; state power agencies Members; alternative power/public interest Members; independent transmission company Members; large/small retail Members; and by Federal Power Marketing Agency Members.²¹⁵ Votes conducted in Organizational Groups or task forces are done by a simple majority with each representative having one vote.²¹⁶

SPP fees have been a barrier to eNGO participation. The annual membership fee is \$6,000 plus an application fee to be determined by the Board of Directors.²¹⁷ An eNGO or other “legitimate public interest group” can request a waiver of the annual membership fee, but the waiver is subject to annual review.²¹⁸ The initial waiver request is directed to the President and the renewal is subject to Board

205. *Id.* § 5.1.1.1.

206. *Id.* § 5.1.1.2.

207. *Id.* § 5.1.2.

208. SW. POWER POOL, INC., *supra* note 200, § 5.1.5.

209. *Id.* § 6.1.

210. *Id.*

211. *Id.* at §4.3.

212. SW. POWER POOL, INC., *supra* note 200, § 6.6.

213. *Id.* at § 6.2.

214. *Id.* at § 6.6.

215. *Id.*

216. SW. POWER POOL, INC., *supra* note 200, § 3.9.2.

217. *Id.* at § 8.2.

218. *Id.*

approval.²¹⁹ Exit fees have been a point of contention in SPP and many entities, including public interest organizations and renewable energy developers, had long argued that potential large exit fees discouraged them from becoming SPP stakeholders. The American Wind Energy Association filed a complaint with FERC that the exit fees were a barrier to membership.²²⁰ Multiple public interest groups intervened in support of AWEA's claims that exit fees limited participation opportunities.²²¹ FERC found the exit fees were "unjust and unreasonable because it creates a barrier to membership, is not needed to maintain SPP's financial solvency or avoid cost shifts, and is excessive as a means of ensuring stability in membership and members' financial commitment."²²² FERC ordered SPP to revise its governing documents to eliminate this exit fee for non-transmission owners.²²³ Transmission owners are still subject to the exit as their departure from the RTO may affect the RTO's ability to recover costs or service its debt.²²⁴ Members withdrawing from SPP must pay a withdrawal deposit that will cover any costs of their exit. FERC did not order SPP to eliminate its \$50,000 withdrawal deposit from non-transmission owner stakeholders who are exiting the RTO.²²⁵ However, in SPP's latest amendments to its bylaws and membership agreement, it did remove the withdrawal fee for non-load serving entities.²²⁶

An eNGO can get involved in the SPP governance process by attending SPP meetings. All SPP meetings are open unless an Organization Group decides to limit attendance at the meeting to safeguard confidential information.²²⁷ An eNGO could attend any open meeting but would not have any voting rights unless it joined the SPP.²²⁸

6. CAISO

CAISO is a large state ISO operating in the State of California.²²⁹ CAISO's governance process differs from the other RTOs as it operates through a governor-appointed board governance process and does not divide its stakeholder into member sectors.²³⁰ Quorum of the Board exists when two-thirds of the Board members are present,²³¹ and an initiative needs a majority vote to pass.²³² The Governor of

219. *Id.*

220. *American Wind Energy Assoc. v. Sw. Power Pool, Inc.*, 167 FERC ¶ 61,033 (2019).

221. *Id.* at 61,150.

222. *Id.* at 61,156.

223. *Id.* at 61,147.

224. 167 FERC ¶ 61,033, at 61,154.

225. *SW. POWER POOL, INC.*, *supra* note 200, § 4.2.1(b).

226. *Id.*

227. *Id.* § 3.5.

228. *Id.*

229. *About Us: A reliable and accessible power grid*, CAISO, <http://www.caiso.com/about/Pages/default.aspx> (last visited Sept. 22, 2023).

230. R STREET, *supra* note 52, at 4.

231. *Amended and Restated Bylaws of California Independent System Operator Corporation*, CAISO § 11, <http://www.caiso.com/Documents/ISO-Corporate-Bylaws-amended-and-restated.pdf> (last visited Sept. 22, 2023).

232. *Id.* § 12.1.

California appoints the five members of the Corporation Board of Governors (Board), and the Board members are appointed to three-year staggered terms by the Governor subject to confirmation by the Senate of the State of California.²³³ Selection of the Board is done pursuant to the Board Selection Policy which establishes the process for stakeholders to identify and rank potential candidates.²³⁴ When a Board member is to be replaced, the Board Nominee Review Committee is tasked with considering and recommending potential new board members.²³⁵ The Committee consists of thirty-six stakeholders, who are drawn in equal numbers from six different representative groups including public interest groups which include consumer advocates, environmental groups, and citizen participation groups.²³⁶ The Committee ranks potential candidates from an initial search in order of preference, presents that ranked order to the ISO, and once confirmed by the ISO, the ranked order is sent to the Governor.²³⁷ The Committee works with an independent executive search firm to identify potential candidates who represent as many of the following qualifications as possible: electric industry expertise, markets expertise, general corporate/legal/finance expertise, and public interest expertise, which can include present or former executives of environmental or consumer organizations.²³⁸

CAISO's governance is akin to an agency rulemaking process. CAISO seeks stakeholder input through public comments rather than through stakeholder committees. CAISO has a recurring and non-recurring stakeholder process for gathering input.²³⁹ In the recurring stakeholder process, there is an annual roadmap process to determine which initiatives CAISO will undertake the following year.²⁴⁰ There are two submission deadlines (January and July) for initiatives to go into a catalogue.²⁴¹ Once the catalog is updated, the comment period for the catalog and the initiatives is opened.²⁴² In September, a draft three-year roadmap and draft annual policy plan are published.²⁴³ October and November are reserved for editing these drafts.²⁴⁴ Finally, in December these final drafts are presented to the

233. *Board Selection Policy Version # 5.1*, CAISO 1 (Aug. 17, 2022), <http://www.aiso.com/Documents/Board-Selection-Policy.pdf> [hereinafter *Board Selection Policy*].

234. *Id.*

235. *Id.* at 2.

236. *Id.* at 4-5.

237. *Board Selection Policy*, *supra* note 233, at 5-6.

238. *Id.* at 3-4.

239. *Policy Initiatives*, CAISO (July 10, 2023), <https://stakeholdercenter.aiso.com/StakeholderInitiatives>; *Recurring Processes*, CAISO (July 10, 2023), <https://stakeholdercenter.aiso.com/RecurringStakeholderProcesses>.

240. *Annual Policy Initiatives Roadmap Process – 2023*, CAISO (Jun. 30, 2022), <https://stakeholder-center.aiso.com/RecurringStakeholderProcesses/Annual-policy-initiatives-roadmap-process-2023> [hereinafter *Annual Policy Initiatives*].

241. *Id.*

242. *Market and Infrastructure Policy, Draft 2023 Policy Initiatives Catalog*, CAISO (Feb. 16, 2023), <http://www.aiso.com/InitiativeDocuments/Draft2023PolicyInitiativesCatalog.pdf>.

243. *Annual Policy Initiatives*, *supra* note 240.

244. *Id.*

Board and EIM Governing Board for final approval.²⁴⁵ Once approved, stakeholders and CAISO will know which initiatives will be addressed the following year. In the non-recurring stakeholder process; there are three stages of proposal development, decision, and implementation.²⁴⁶ The non-recurring process is where issues can be brought up as they arise. In the proposal development an issue is introduced through an issue paper which is translated to a straw proposal.²⁴⁷ Next, the straw proposal is classified as either a draft proposal, draft business requirement specification, or draft tariff before it is edited into a final proposal.²⁴⁸ That final proposal is either sent to the Board or the Energy Imbalance Market (EIM) Governing Body.²⁴⁹ Here, the Board or EIM Governing Body review the proposal, make any edits, and vote to file the tariff with FERC.²⁵⁰ Throughout this whole process, stakeholders can provide public comments on these proposals and on the implementation of the final FERC-approved tariff.²⁵¹

Without a formal stakeholder governance structure, eNGOs still have several ways of participating in the CAISO governance process. First, eNGOs can participate in the stakeholder processes mentioned above through public comment. Second, eNGOs are able to attend and comment at any CAISO meeting.²⁵² eNGOs can also participate in the quarterly Board meetings or any other special Board meeting.²⁵³ The only meeting eNGOs cannot participate in are Board executive sessions.²⁵⁴ eNGOs have access to any meeting materials that are not confidential, can record meetings, and elect to receive notices of meetings.²⁵⁵ CAISO runs an Stakeholder Symposium which brings together members of the public to discuss issues before and that could come before it.²⁵⁶ eNGOs can also completing the survey CAISO regularly sends out on different aspects of participating in CAISO governance. In August 2019, CAISO issued a Stakeholder Process Survey to determine the effectiveness of seeking comments and responding to the comments.²⁵⁷ In November 2020, CAISO surveyed stakeholders on the effectiveness of its communications related to the development of policy.²⁵⁸

245. *Id.*

246. *Id.*

247. *Annual Policy Initiatives*, *supra* note 240.

248. *Id.*

249. *Id.*

250. *Id.*

251. *Annual Policy Initiatives*, *supra* note 240.

252. *Open Meeting Policy Version # 3.10*, CAISO 4, 7, <https://www.caiso.com/Documents/CaliforniaSOOpenMeetingPolicy.pdf>.

253. *Id.* at 5-6.

254. *Id.* at 7.

255. *Id.* at 2-3.

256. *California ISO 2022 Stakeholder Symposium*, CAISO 1, <https://californiaiso.swoogo.com/2022StakeholderSymposium> (last visited Sept. 17, 2023).

258. *2020 California ISO Stakeholder Process Communications Survey Results and Response*, CAISO 1, <https://www.caiso.com/PublishedDocuments/2020-California-ISO-Stakeholder-Process-Communications-Survey-Results-and-Responses.pdf> (last visited Sept. 17, 2023).

7. ERCOT

ERCOT is a single state ISO operating the bulk power grid in Texas.²⁵⁹ As the only non-FERC jurisdictional RTO, ERCOT is “governed by a board of directors and subject to oversight by the Public Utility Commission of Texas” (PUC).²⁶⁰ ERCOT uses an advisory governance model where the eleven-member Board of Directors retains management of ERCOT affairs.²⁶¹ The Board underwent significant changes following Winter Storm Uri. The number of members was reduced from sixteen to eleven and all members are to be selected by a Board Composition Committee who three members are appointed by the governor, lieutenant governor, and the speaker of the house of representatives.²⁶² Prior to the passage of SB2, eight board members were selected from six different market participant sectors and five members were to be unaffiliated with any market segment.²⁶³ After the bill passed, the market segment-specific and unaffiliated member slots were eliminated and prospective board members were required to have executive-level experience in one of the following professions: finance; business; engineering, including electrical engineering; trading; risk management; law; or electric market design.²⁶⁴ Another major change was any rules adopted by or enforcement actions taken by ERCOT must be approved by the PUC, whereas in the past the rules and enforcement actions were only subject to oversight and review.²⁶⁵

Membership opportunities in ERCOT for eNGOs are limited. To become a member of ERCOT, an entity must qualify for one of the following segments: cooperative, independent generator, independent power marketer, independent renewable energy provider, investor-owned utility, municipal, or consumer in one of three sub-segments (commercial – large and small, industrial, and residential).²⁶⁶ ERCOT’s three membership categories are Corporate Members, Associate Members, and Adjunct Members.²⁶⁷ Corporate Members are the only members that can vote on matters submitted to the general membership including election of Technical Advisory Committee Representatives and amendments to the bylaws.²⁶⁸ Associate Members have all the rights contained in the bylaws except the

259. *About ERCOT*, ERCOT (Sept. 17, 2023), <https://www.ercot.com/about>.

260. *Id.*

261. *Amended and Restated Bylaws of Electric Reliability Council of Texas, Inc.*, ERCOT § 4.1-4.2 (Jul. 31, 2020), https://www.ercot.com/files/docs/2021/11/16/06_Amended_and_Restated_Bylaws_eff_07.31.2020_.pdf.

262. TEX. UTIL. CODE ANN. § 39.1513(a) (West 2021).

263. Spencer Grubbs, *Winter Storm Uri, The 87th Legislature Takes on Electricity Reform*, TEX. COMPTROLLER (Oct. 2021), <https://comptroller.texas.gov/economy/fiscal-notes/2021/oct/winter-storm-reform.php>.

264. TEX. UTIL. CODE ANN. § 39.151(g-1) (West 2021).

265. Grubbs, *supra* note 263.

266. *Amended and Restated Bylaws of Electric Reliability Council of Texas, Inc.*, ERCOT § 3.1(a) (Oct. 12, 2021), https://www.ercot.com/files/docs/2021/11/16/06_Amended_and_Restated_Bylaws_eff_07.31.2020_.pdf [hereinafter ERCOT BYLAWS 2021].

267. *Id.* § 3.2.

268. *Id.* § 3.2(a).

right to vote on any matter submitted to the general membership.²⁶⁹ Adjunct Members can be approved for membership if they do not meet the definitions and requirements to join as a Corporate or Associate Member and cannot vote on matters submitted to the general membership nor serve on the TAC or any TAC subcommittee.²⁷⁰ As eNGOs do not fall into the membership categories that are eligible to become Corporate or Associate Members, they would have to seek membership as an Adjunct Member.²⁷¹ Annual dues are \$2,000 for Corporate Members, \$500 for Associate Members, \$500 for Adjunct Members, \$100 for Corporate Residential and Commercial Consumers Members, and \$50 for Associate Residential and Commercial Consumers Members.²⁷² Any member can request a waiver of the annual dues for good cause, but it is subject to the Board of Directors approval.²⁷³

The Technical Advisory Committee is the key committee in ERCOT and eNGOs are prevented from being members of the committee. TAC members are drawn from the six market segments and confirmed by ERCOT's board.²⁷⁴ TAC conducts studies and plans necessary to accomplish the purposes of ERCOT.²⁷⁵ TAC, with the assistance of its subcommittees, makes recommendations to the Board of Directors on market design rule changes and system reliability enhancements.²⁷⁶ eNGOs can participate at open Board meetings. Board meetings and subcommittee are to be open to the public unless in executive session.²⁷⁷ Public input is solicited on any issue before the Board.²⁷⁸

III. CONCLUSION

Ensuring that eNGOs had a seat at the governance table was not a priority when utilities and other market participants worked to initially establish RTOs. However, the importance of environmental issues in the energy sector and across these regions has increased dramatically and, at the same time, the pathway to effective participation for eNGOs is not straightforward. There are challenges and barriers that require organizations to take extra steps to secure their participation opportunities and, in some cases, prevent them from fully participating. Our review of stakeholder governance processes identifies how eNGOs can participate, limits on participation, and the costs of engagement. Looking across the different RTOs, we see the influence of history on the shape and function of current governance processes.

No two RTOs share the same governance structure or afford the exact same participation opportunities. There is no significant difference between single-state and multi-state RTOs in the formal participation opportunities for eNGOs. High

269. *Id.* § 3.2(b).

270. ERCOT BYLAWS 2021, *supra* note 266, § 3.2(c).

271. *Id.* § 3.6(b).

272. ERCOT BYLAWS 2021, *supra* note 266, § 3.4

273. *Id.*

274. *Id.* § 4.8, 5.1(a).

275. *Id.* § 5.2.

276. *Technical Advisory Committee*, ERCOT (Feb. 20, 2023), <https://www.ercot.com/committees/tac>.

277. ERCOT BYLAWS 2021, *supra* note 266, § 4.6(e).

278. *Id.* § 4.6(d).

degrees of variability between all RTOs remains the only constant element that can be drawn from the comparison. eNGOs are often paired with other stakeholders who share different views and represent different interests. Only in MISO, do environmental organizations have their own stakeholder sector and in PJM and ERCOT, there is no direct representation opportunity. Changes to governance structure may or may not provide for a greater diversity of voices. MISO created an eleventh stakeholder sector by moving Other out of the Environmental Organization sector, thus ensuring that the sector did not contain potentially competing viewpoints. While in ERCOT, recent governance changes removed a participation opportunity for eNGOs. CAISO has no stakeholder sector structure, NYISO groups Environmental Organizations with Public Power, although they are each subsectors. Even the use of environmental advisory groups is not consistent across all RTOs and between RTOs which do offer this participation opportunity.

Board advising opportunities are highly variable. eNGOs may have direct access through specially designed consultation processes or can participate on key advisory committees. Alternatively, access to key committees is often limited or non-existent. For example, eNGOs cannot serve on ERCOT's Technical Advisory Committee which is responsible for advising the Board of Directors on key technical and policy matters. Some RTOs require multiple qualifying steps, such as a leadership position on a lower-level committee, to be eligible to join key advisory committees. Additional steps create procedural barriers that may artificially limit participation.

Board nomination procedures are equally variable. In PJM, eNGOs do not participate in the nomination process because they cannot join a stakeholder sector. In other RTOs, like ISO-NE, eNGOs can serve on the nominating committee that presents directors for a vote or vote to endorse a slate of directors, but they do not have a formal vote on who is elected to the Board. In some cases, such as SPP, all members, including eNGOs, may vote on potential candidates to the Board.

In most RTOs, membership fees – admission and annual – are reduced for public interest and consumer advocate groups and some RTOs, like SPP, allow for those groups to apply for a waiver of fees. CAISO's open process does not require stakeholders to apply for membership nor does it require them to submit a fee; however, it does not negate the resource cost of participation. Lowering initial and annual fees can encourage greater participation, but those costs are minimal as compared to the cost of participating in stakeholder governance processes. Lower cost participation opportunities, like NYISO's non-voting entity option, often have reduced participation rights that provide access to meetings without the ability to vote on proposals. Analyzing how eNGOs participate in RTO markets today is an important first step to informing FERC, state governments, RTOs and other stakeholders how to improve the participation of this important interest group at a time that decarbonization of the energy system is of paramount importance.

INCORPORATING ENVIRONMENTAL CONCERNS INTO WHOLESALE ELECTRIC MARKETS: RECOMMENDATIONS FOR INCREASING EFFECTIVE PARTICIPATION OF ENGOS IN RTO GOVERNANCE STAKEHOLDER PROCESSES (PART II)

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Synopsis: This, the second of our two companion articles focusing on the role of environmental non-governmental organizations (eNGOs) in RTOs, recounts our interviews with key market participants and observers to hear their views on where RTO governance structures hinder and help effective participation of eNGOs. Those interviews form the basis of the recommendations we present below on how to improve RTO governance processes.

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I. SECTION I

A. Introduction

Regional Transmission Organizations (RTOs)¹ operate the transmission grid and manage the electricity markets for more than 60% of the electricity supply in the United States. For a number of reasons, including ensuring nondiscriminatory open access to the transmission system, these organizations were developed with elaborate stakeholder consultation and decision-making processes. Given the complexity of these processes, standing outside of an RTO and trying to understand how the governance system is designed and operated is akin to guessing what is happening inside a black box. You can read the rules and memorize the

1. References to RTOs in this article include both Regional Transmission Organizations and Independent System Operators (ISOs) in the states of New York and California.

procedures, but that does not mean that you understand how those rules and procedures work in practice. Practical experience is critical to understanding how rules and procedures translate into or limit effective participation opportunities. We conducted multiple interviews with persons representing environmental non-governmental organizations (eNGOs) in RTO stakeholder governance processes to better understand how eNGOs participate in these processes today. We used those interviews to gather insight on how eNGOs can effectively engage in RTO governance as we transition to a clean energy future. Our interview subjects work in every RTO in the country and collectively represent hundreds of years of experience in the energy law and policy field.² Interviewees were asked a standardized set of questions and given the opportunity to share their personal experiences and viewpoints.³ The lessons they share were learned by engaging in RTO stakeholder meetings. This article starts with the position that there is a need for an expeditious clean energy transition, and it accepts the principle that enhancing effective participation by eNGOs is an important step to accelerating that transition.⁴

Effective participation starts well before any votes are taken. The issues RTOs tackle from transmission planning and cost allocation, generator interconnection reform, to system reliability in high renewable energy scenarios are first addressed in lower-level working group and task forces. Participation in those processes shapes the proposals that receive formal votes and are filed with FERC. Opportunities for stakeholder participation in the decision-making process are determined by the rules and structure of the governance processes and that is the focus of this article.⁵ Section I introduces the importance of institutional design in facilitating effective participation. Section II discusses the collected recommendations of our interviewees and provides analysis and examples of how to implement their suggestions. Section III summarizes key conclusions.

B. The Importance of Institutional Design

In our interviews of eNGOs that participate in RTO governance processes, we heard a statement that encapsulates the theme of our analysis. Upon being asked about voting on proposed measures, the eNGO stated that “[h]aving a vote is a weak tool.” This statement captures what we gleaned from more than a dozen

2. See *infra* Appendix I (containing a complete list of interviewees).

3. See *infra* Appendix II (containing the list of questions posed to each interviewee). Please note that comments and recommendations are not attributed to individual interviewees as part of our agreement with interview subjects to enable a free-flowing conversation.

4. E.g., Mark James et al., *How the RTO Stakeholder Process Affects Market Efficiency*, 112 R ST. POL'Y STUD. 1 (2017), <https://www.rstreet.org/wp-content/uploads/2018/04/112-1.pdf> [hereinafter James et al.]; Michael H. Dworkin & Rachel Aslin Goldwasser, *Ensuring Consideration of the Public Interest in the Governance and Accountability of Regional Transmission Organization*, 28 ENERGY L.J. 543 (2007); Christina Simeone, *PJM Governance: Can Reforms Improve Outcomes?*, UNIV. OF PA. KLEINMAN CTR. FOR ENERGY POL'Y (May 19, 2017), <https://kleinmanenergy.upenn.edu/wp-content/uploads/2020/08/PJM-Governance-Reforms-1.pdf> (discussing the value of eNGO participation and, in general, enhanced stakeholder participation to ensure that RTO governance serves the public interest) [hereinafter Simone].

5. See Mark James et al., *Integrating Environmental Concerns into Wholesale Markets: The Impact of Regional Transmission Organization Governance Models on eNGO Participation in the Stakeholder Governance Process*, 44 ENERGY L.J. 463 (explaining how the governance processes work in each RTO); see also James et al., *supra* note 4.

interviews, that being able to vote on key issues is a good tool, but by itself it is not sufficient to guarantee effective participation. Effective participation depends upon having adequate resources; consistent and meaningful access to key decision-makers; access to key RTO processes; transparency in RTO decision-making processes and accountability for decision-makers; and a board prepared for and attuned to the interests of all stakeholders. Having a vote is an important right and tool for effective participation, but without other measures that equalize resource, information, and access asymmetries, a voting right is not a direct pathway for effective participation. This article does discuss voting right differences, but the focus is on key barriers to enhancing eNGO participation in RTO stakeholder governance in addition to voting rights. Before any vote is called, there are opportunities to influence decision-making and seizing those opportunities depends on how participation is encouraged and supported.

Our analysis demonstrates the importance of institutional design in creating participation opportunities and determining process outcomes. The study of institutional design examines how the shape and form of institutions and institutional processes influence which stakeholders participate; how stakeholders share information, deliberate, and make collective decisions. Institutional design shapes and influences the connection between stakeholder engagement and policy decisions and outcomes.⁶ RTOs are “both a novel form of energy system governance and” a central player in the clean energy transition.⁷ RTO governance processes must balance multiple and sometimes competing interests of a multitude of different organizations and entities.⁸ RTOs rely on stakeholder participation to resolve problems through discussion, deliberation, negotiation, and consensus-building. Variations in the institutional design of RTOs, attributable to the different histories from which RTOs emerged and the openness of the guidance and instruction provided by FERC on the essential elements of RTO governance processes, create an opportunity to evaluate and compare governance structures and the operation of governance processes.⁹

Effective participation in the governance system is critical to being able to influence decisions and outcomes. However, effective participation requires adequate resources, an engagement process that facilitates informed participation, and that stakeholder participation is viewed as more than just a formality. Institutional design can negate the tendency for certain stakeholders to maintain privilege

6. E.g., Elizabeth Baldwin, *Exploring How Institutional Arrangements Shape Stakeholder Influence on Policy Decisions: A Comparative Analysis in the Energy Sector*, 79 PUB. ADMIN. REV. 1, 1 (2018), https://www.researchgate.net/profile/Elizabeth-Baldwin-3/publication/325084346_Exploring_How_Institutional_Arrangements_Shape_Stakeholder_Influence_on_Policy_Decisions_A_Comparative_Analysis_in_the_Energy_Sector/links/5c950d2e92851cf0ae910314/Exploring-How-Institutional-Arrangements-Shape-Stakeholder-Influence-on-Policy-Decisions-A-Comparative-Analysis-in-the-Energy-Sector.pdf [hereinafter Baldwin]; see Stephanie Lenhart & Dalten Fox, *Participatory Democracy in Dynamic Contexts: A Review of Regional Transmission Organization Governance in the United States*, 83 ENERGY RSCH. & SOC. SCI. 1, 2 (2022), <https://www.sciencedirect.com/science/article/pii/S2214629621004369>.

7. Lenhart & Fox, *supra* note 6, at 1.

8. *Id.* at 2.

9. *Id.*; see also *Electric Power Markets*, FERC, <https://www.ferc.gov/electric-power-markets> (last visited Sept. 21, 2023).

within the stakeholder process. Institutional design can improve stakeholder engagement by addressing the rules for participation (“which stakeholders are allowed to participate and how they are selected”); the scoping rules (how final policy decisions are derived from prior, lower-level decisions); the information rules (“what information is available to” stakeholders and how stakeholders can contribute information); and voting aggregation rules (how stakeholder contributions are weighed and considered).¹⁰

We acknowledge that the sheer size of RTO governance processes prevents us from providing a comprehensive analysis of all available options for supporting effective participation by eNGOs. Scholarship shows that variations in design matter for addressing problems with governance and that effective stakeholder participation can “increase legitimacy, efficiency, effectiveness, and justice.”¹¹ RTO stakeholders recognize the importance of RTO governance on addressing consumer costs, consumer choice, environmental impacts, and innovation while simultaneously asserting that RTO governance processes lack open access, fairness, and transparency.¹² We interviewed multiple RTO stakeholders on the obstacles to effective participation and our research focuses on opportunities to reduce or remove those hurdles to increase participation opportunities and boost legitimacy in the stakeholder process.

II. SECTION II

A. *Recommendations for Overcoming Resource Burdens*

A consistent issue identified by our interviewees was the high cost of participating in RTO stakeholder governance processes. In 2007, Dworkin and Goldwasser wrote “the complicated, technical, and expensive structure of the stakeholder process results in serious challenges for public representation.”¹³ The resource burdens of effective participation have only grown in concert with the range and complexity of issues being addressed by RTOs. Effective participation requires participation at the early stages of proposal and issue development, subject-matter expertise, an understanding of RTO processes and organization, and a constant presence throughout the governance process. This type of participation requires financial and staffing resources that have not been consistently available to eNGOs. In this section, we discuss the problem and present a couple of potential models for resolving this hurdle.

10. Baldwin, *supra* note 6, at 3 (describing the extensive research into different aspects of institutional design and their impacts on the effectiveness of stakeholder engagement).

11. Lenhart & Fox, *supra* note 6, at 4 (citing recent research into the impact of stakeholder governance design on stakeholder participation opportunities and governance process outcomes).

12. Kate Konschnik, *RTOGov: Exploring Links Between Market Decision-Making Processes and Outcomes*, NICHOLAS INST. FOR ENV'T POL'Y SOL., DUKE UNIV. 2-3 (2019), https://nicholasinstitute.duke.edu/sites/default/files/publications/RTOGov_Exploring_Links_Final.pdf (discussing long list of stakeholder concerns including lack of access to key processes and low visibility into decision-making process, and suggestions for improving structure of RTO governance processes and how RTOs engage, listen to, and are directed by their stakeholders).

13. Dworkin & Goldwasser, *supra* note 4, at 583.

Our interviewees repeatedly mentioned how funding and staffing constraints limit participation and can prevent effective participation. Lack of full representation by interested parties limits input from these parties, depriving them of the opportunity to fully access information, process that information and advocate for their positions with other stakeholders, RTO Boards and ultimately FERC and the courts, ultimately skewing decision-making processes and biasing governance outcomes.¹⁴ The resource constraints on eNGOs and public interest groups are magnified by disparity in the level of resources available to other stakeholders. Utilities can employ attorneys and consultants to construct, present, and support their positions in regulatory proceedings with the assurance that those costs are recoverable from their ratepayers and customers. Similarly, large private generating companies have office buildings full of analysts, engineers and energy traders who can quickly analyze the impact of stakeholder proposals on the market and the grid. This is an advantage not available to eNGOs who must manage budget and staffing limitations when participating in stakeholder governance processes. Effective participation requires direct involvement and representation in the different levels of RTO stakeholder governance, as proposals are being developed and shaped and as they are being debated and adopted. Shrinking the resource advantage of utilities and other market participants would create a better balance between stakeholders.

1. Intervenor Compensation Programs

Targeted intervenor funding has been used to increase the participation of public interest groups in RTOs and state public utility commissions. Many RTOs provide financial and administrative support for state consumer advocates. At the state level, sixteen states have authorized the creation and operation of intervenor compensation programs in statute or administrative code with eight states actively operating compensation programs (California, Idaho, Michigan, Minnesota, Oregon, Wisconsin, Illinois, and Washington).¹⁵ In this article, we discuss two intervenor funding programs that were identified in our interviews, the Consumer Advocates of PJM States (CAPS) program and the California Public Utilities Commission's Intervenor Compensation Program (CPUC ICOMP).¹⁶ The programs share a similar focus on improving participation and representation from public interest groups, but there are differences in their approaches that could provide some guidelines for developing a public interest intervenor compensation program in an RTO.

14. FTI Consulting, Inc., *State Approaches to Intervenor Compensation*, NARUC 4 (2021), <https://pubs.naruc.org/pub/B0D6B1D8-1866-DAAC-99FB-0923FA35ED1E> (last visited Sept. 30, 2023) [hereinafter NARUC].

15. *Id.* at 5 (identifying 6 states with active programs as of 2021); Illinois and Washington commenced programs after 2021), see *Consumer Intervenor Compensation Fund*, ICC, <https://www.icc.illinois.gov/informal-processes/Consumer-Intervenor-Compensation->; see also *Participatory Funding*, WASH. UTIL. AND TRANSP. COMM'N, <https://www.utc.wa.gov/participatoryfunding> (program was implemented in 2023) (last visited Sept. 30, 2023).

16. *Consumer Advocates of the PJM States*, PJM, <http://pjm-advocates.org/home.html> (last visited on Sept. 30, 2023); *Intervenor Compensation Program*, CPUC, <https://www.cpuc.ca.gov/proceedings-and-rulemaking/intervenor-compensation> (last visited on July 5, 2021).

Instituting an intervenor compensation program can face pushback from market participants and incumbent stakeholders. In our interviews, we heard concerns from other market participants about the level of funding required, who would provide the funding, how to ensure that the supported participants would make a meaningful contribution to shaping governance outcomes, and whether parties would demonstrate actual financial need. Similarly, we heard concerns on how any support program should minimize administrative burdens while creating a stable and consistent source of funding. Both concerns can be managed through program design.

2. Structure of an Intervenor Compensation Program

Differences in the design and operation of state programs create a mosaic of potential design options that can be leveraged to address stakeholder concerns including program administrative and financial costs. The key design variables discussed in this article are when funding is available, eligibility screening, determination of financial hardship, cost containment practices, and program spending caps.

The first opportunity to share the design of a program starts with determining how and when participants will be compensated. States can opt for either a cost reimbursement program or a grant-based program. Cost reimbursement programs compensate intervenors at the conclusion of the proceeding while grant-based programs can provide funding in advance of participation in a proceeding.¹⁷ While advanced funding creates budget certainty, it is not the standard practice as most programs compensate participants at the conclusion of a proceeding. Eligibility determinations are the next opportunity to shape program design. Every state compensation program restricts participation in their programs through an eligibility determination. Specific parties may be restricted from even applying for a determination of eligibility. In most states, utilities in direct competition to the utility or utilities involved in a proceeding are prohibited from applying for compensation and in some states, municipalities and other government entities are barred from participation.¹⁸ Parties who are eligible may be subject to additional screening to determine whether they have or will make a significant, and unique, contribution to the proceedings and that their participation was necessary for a fair determination in the proceeding.¹⁹ Additionally, some states require a demonstration of financial hardship that would result from uncompensated participation.²⁰ The process for making eligibility determinations often includes deadlines for filing notices of intent to participate and to seek compensation and deadlines for the commission to issue its decision.²¹

Once a party is deemed eligible for compensation, the next issue can be establishing what costs are compensable. Often, limiting compensation to reasona-

17. NARUC, *supra* note 14, at 11.

18. *Id.* at 11-12.

19. *Id.* at 12.

20. *Id.*

21. NARUC, *supra* note 14, at 12.

ble costs is used to manage program expenditures. Some states establish prevailing market rates and limit cost reimbursements to those rates while other states leave the determination of what is a reasonable cost to the commission or an administrative law judge.²² Some states limit costs to rates paid by the commission for third-party services.²³ Clarity in compensable costs creates additional budget certainty for parties using third-party attorneys and expert witnesses. After a party has been deemed eligible and rates for compensation have been set, the final design option is in whether a state opts to cap individual compensation amounts in a proceeding or create annual budgets for their compensation programs.²⁴ Caps on available compensation can artificially reduce participation as complex proceedings may require the longer participation times and greater usage of third-party attorneys and expert witnesses.

Where states do not vary is with respect to the funding source for the state intervenor compensation program. Every state collects the program funds from jurisdictional utilities which then pass the costs onto their ratepayers. However, which utility pays to support participation in a specific proceeding can vary. Some states recoup the approved costs of intervenor participation from the utility or utilities participating in the proceeding. Other states recover the costs from a general assessment placed upon all jurisdictional utilities.²⁵ The final design decision is whether utilities can recover costs in the same proceeding in which they were incurred or in a future proceeding. In either situation, costs are categorized as operational costs passed through to ratepayers.

The following case studies demonstrate how an RTO might implement an intervenor support program and how program design is critical to supporting eNGO participation.

3. Consumer Advocates of PJM States

The CAPS is an example of how an intervenor support program could be funded through charges on existing RTO transactions. CAPS was started in 2013 to address the lack of direct representation of consumer interests in the PJM stakeholder process. The push for greater consumer advocate involvement in PJM stakeholder governance followed the formal formation of the organization. Early on, it was recognized that there were two points of engagement opportunities for consumer advocates: in PJM stakeholder governance processes or in litigation before FERC.²⁶ The initial funding for CAPS came from a FERC market manipulation settlement and as a condition of a merger agreement.²⁷ As the original pool of funds was dwindling, a consistent source of funding was needed to continue its

22. *Id.* at 13.

23. *Id.*

24. *Id.*

25. NARUC, *supra* note 14, at 13.

26. FTI Consulting, Inc., *Model Corporate Governance for Regional Transmission Organizations and Independent System Operators*, NAT'L ASSOC. STATE UTIL. CONSUMER ADVOCs. 3 (Jan. 2009), <https://nasuca.org/wp-content/uploads/2009/01/Model-RTO-.pdf>.

27. *A Brief History and Overview of the Consumer Advocates of the PJM States*, CAPS 5 (March 17, 2019), https://0201.nccdn.net/1_2/000/000/09c/f55/CAPS-History-and-Overview-Report-v1-052919--002-.pdf [hereinafter CAPS].

operations. Individual state contributions were considered but deemed to be insufficiently reliable to create a stability for the organization.²⁸ In 2016, CAPS sought and “received stakeholder and PJM Board support for permanent funding” through the PJM tariff.²⁹ CAPS’ funding source was switched to a charge on each customer “using Network Integration and Point-to-Point Transmission Service under” the PJM Tariff.³⁰ CAPS submits a preliminary annual budget to the PJM finance committee and receives comments back from the finance committee before submitting its annual final budget to PJM which then includes the CAPS funding in its annual budget submission to FERC.³¹ CAPS program funding was \$450,000 in 2016 and has risen to \$500,000 in PJM’s 2021 FERC approved budget, before declining to \$400,000 for 2022.³² The funding model was based on the funding arrangement for the Organization of PJM States, Inc (OPSI).³³

CAPS’ eligibility requirements and restrictions on the usage of funds address some of the stakeholder concerns expressed in our interviews. CAPS membership is voluntary and open to all state-approved consumer advocate offices representing end use consumers within PJM’s territory.³⁴ CAPS funds can only be used to provide educational support, attend meetings, and provide stakeholder outreach and engagement.³⁵ For example, funds are used to provide CAPS members with internal written briefings prior to meetings of the PJM’s Members Committee and the Markets and Reliability Committee.³⁶ The briefings review each issue scheduled for voting and prepare members for the organization’s conference call to discuss voting strategies.³⁷ CAPS may not use its Tariff-derived funds to contest PJM’s filings at FERC,³⁸ but individual CAPS members are not prevented from making filings to FERC.³⁹

The CAPS program is an example of how RTO tariffs could be amended to create a stable source of funding to facilitate participation of public interest groups in RTO stakeholder governance processes. Limits on how the funds might be

28. *Id.*

29. *Id.* at 6.

30. *Schedule 9 – CAPS, CAPS Funding*, PJM OPEN ACCESS TRANSMISSION TARIFFS 1, <https://www.pjm.com/directory/etariff/MasterTariffs/23TariffSections/26422.pdf>.

31. *Id.*

32. *Id.*; *Approved 2021 Federal Energy Regulatory Commission (FERC) Rate, Consumer Advocates of PJM States (CAPS) Rate and Organization of PJM States (OPSI) Rate*, PJM 2, <https://www.pjm.com/-/media/committees-groups/committees/fc/postings/2021/2020-9-ferc-9-opsi-and-caps-rates.ashx> (last visited Sept. 30, 2023); *Approved 2022 Federal Energy Regulatory Commission (FERC) Rate, Consumer Advocates of PJM States (CAPS) Rate and Organization of PJM States (OPSI) Rate*, PJM 2, <https://techttestac1.pjm.com/-/media/committees-groups/committees/fc/postings/2022/2022-9-ferc-and-preliminary-9-opsi-and-caps-rates.ashx> (last visited Sept. 30, 2023).

33. CAPS, *supra* note 27, at 4.

34. *Consumer Advocates of PJM States, Inc. (CAPS)NSUMER ADVOCATES OF BYLAWS*, CAPS 1, (effective Mar. 20, 2018) https://0201.nccdn.net/4_2/000/000/01e/20c/approved.2018-03-20-CAPS-Bylaws-Revised.pdf.

35. *Id.*

36. CAPS, *supra* note 27, at 7.

37. *Id.*

38. *Id.*

39. *Id.* at 8.

used, such as a bar on using RTO tariff funds on FERC litigation, could alleviate concerns from the parties contributing to the fund. The constraints on which parties may use the funds does not align with the diversity of environmental NGOs that do or could participate in RTO stakeholder governance. However, the next case study presents options for addressing this concern.

4. CPUC Intervenor Compensation Program

CPUC's ICOMP is the most active intervenor compensation program in the country. In 2022, CPUC administrative law judges received 117 claims for compensation and issued 147 compensation decisions.⁴⁰ Commenters have heralded ICOMP as the gold standard in utility commission intervenor support programs because of the pool of funds available to intervenors, the range of compensable services, and how the program is administered.⁴¹ ICOMP has a lengthy history in California, starting as a Commission program in 1981 before being codified by the state legislature in 1985.⁴² The program was established to provide "compensation for reasonable advocate's fees, reasonable expert witness fees, and other reasonable costs to public utility customers of participation or intervention in any proceeding of the commission."⁴³ The program is available to all formal proceedings of the commission involving electrical, gas, water, and telephone utilities.⁴⁴

ICOMP's purpose is to increase participation that enhances commission outcomes. ICOMP rules define who can participate in the program and set out guidelines to ensure that the funds are used to advance and improve commission decisions and orders. Funding eligibility is limited to customers. Under California public utility law, a "customer" is broadly defined to cover participants representing consumers, customers, or subscribers of electric, gas, telephone, telegraph, or water utility subject to commission jurisdiction, a representative authorized by a customer, and a representative of a group or organization authorized pursuant to its articles of incorporation or bylaws to represent the interests of residential customers or small commercial customers.⁴⁵ Customers must pass two gatekeeping tests at the beginning and end of the proceedings to become eligible for compensation and to receive compensation. First, the customer must demonstrate significant financial hardship, which is defined as being unable to afford, without undue hardship, to pay the costs of effective participation or in the case of a group or

40. *California Public Utilities Commission 2022 Annual Report*, CPUC 22 (2022), <https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/safety-and-enforcement-division/reports/annual-reports/2022-cpuc-annual-report.pdf>.

41. Tyson Slocum, *National Energy & Utility Affordability Coalition State Level Advocacy: Interaction with PUCS & Beyond*, PUB. CITIZEN (June 26, 2017), <https://www.citizen.org/wp-content/uploads/migration/tyson-slocum-presentation-intervenor-funding-neuac-annual-conference-2017.pdf>.

42. *Intervenor Compensation Program Guide*, CPUC 4 (Apr. 2011) <https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/administrative-law-judge-division/documents/icom-p-materials/updated-icom-p-program-guide-april-2017.pdf> [hereinafter *ICOMP Guide*].

43. CAL. PUB. UTIL. CODE § 1801 (2023).

44. *Id.* § 1801.3(a) (2023).

45. *Id.* § 1802(b) (2023).

organization that the economic interests of individual members is small in comparison to the costs of effective participation in the process.⁴⁶ Second, customers must make a substantial contribution to the proceedings. A substantial contribution is deemed to be when a customer's presentation has substantially assisted the commission making its order or decision because the order or decision adopted in whole or in part one or more of the factual contentions, legal contentions, or specific policy or procedural recommendations presented by the customer.⁴⁷ Furthermore, there is a statutory requirement to administer the program in a manner that avoids unproductive or unnecessary participation that duplicates participation by other adequately represented interests or is not necessary to make a fair determination in the proceeding.⁴⁸ Determinations of significant financial hardship are made by administrative law judges and the commission issues a decision on the determination of significant contributions.⁴⁹ A finding of significant hardship can be made when the notice of intent is filed or when the claim is filed.⁵⁰ A finding of significant financial hardship creates a rebuttable presumption of significant financial hardship for commission proceedings initiated within one calendar year of the finding.⁵¹ The program has been most heavily used by parties advocating for consumer protections, but it also have supported organizations advancing environmental interests. As of July 5, 2023, pending customer requests for compensation include requests from Wild Tree Foundation, Sierra Club, Environmental Defense Fund, Green Power Alliance, Natural Resources Defense Council, and the California Environmental Justice Alliance.⁵²

The CPUC determines which utilities are responsible for compensation awards depending upon the nature of the proceedings. Single utility proceedings require that compensation awards are paid for by the utility in the proceeding.⁵³ When the proceeding applies to a utility category then the payment of the compensation award is shared between the jurisdictional utilities affected by the Commission's order.⁵⁴ The utility or utilities are permitted to recover the award paid as an expense in its rates and the amount of the award can be fully recovered within one year from the date of the award.⁵⁵

Reducing the administrative and financial burdens of participation in Commission proceedings is an intentional feature. Key program design elements include administrative support for participants, streamlined submission requirements, standardized submission forms, and a statutory deadline for processing compensation claims. The CPUC Public Advisor's Office provides procedural information to parties seeking to participate in CPUC proceedings and it offers

46. *Id.* § 1802(h) (2023).

47. CAL. PUB. UTIL. CODE § 1802(j) (2023).

48. *Id.* § 1801.3(f) (2023).

49. *Id.* § 1804(b)-(c) (2023).

50. *Id.* § 1804(a)(2)(B) (2023).

51. CAL. PUB. UTIL. CODE § 1804(b)(1).

52. California Public Utilities Commission, Intervenor Compensation Requests, July 5, 2023 (on file with author).

53. CAL. PUB. UTIL. CODE § 1807(a) (2023).

54. *Id.*

55. *Id.*

educational programs and services.⁵⁶ The CPUC publishes an *Intervenor Compensation Program Guide* that includes instructions on how to file a Notice of Intent to Participate and Requests for Intervenor Compensation as well as all the necessary forms to do so.⁵⁷ Customers have 30 days after the prehearing conference is scheduled to file and serve all parties to the proceeding with a notice of intent to claim compensation.⁵⁸ The notice of intent must include a statement on the nature and extent of the planned participation in the proceeding and an itemized estimate of the expected compensation request.⁵⁹ Hourly rates for each type of professional service are established and published by the Commission, so intervenors are able to more precisely develop their itemized estimates.⁶⁰ The Notice of Intent (NOI) and the Ruling of the NOI are combined into a single document to expedite the filing and the ALJ decision.⁶¹ Intervenor requests must be filed within 60 days of the Commission issuing a final order or decision,⁶² the Commission has a 75-day deadline for reviewing intervenor compensation requests and is responsible for paying interest when requests are not processed within the allotted time.⁶³

5. Summary

Alleviating resource burdens is the first step towards increasing the diversity of opinions and strengthening the outcomes of governance processes. Combining consistent, stable funding to support public interest group participation with manageable procedural requirements is a pathway to strengthening participation in stakeholder governance processes. Existing intervenor compensation programs like CAPs and ICOMP can serve as models for building up and out RTO support programs. Unless we take action to level the playing field, it is clear that eNGOs will be at a distinct disadvantage in the stakeholder process and ongoing decisions will not fully reflect the important input of this critical stakeholder interest.

B. Recommendations for Expanding Board Functional Diversity

Interviewees repeatedly stressed the missed opportunities of RTO boards to lead on key issues in the energy transition. Boards can serve as a lodestar for staff and stakeholders by establishing a long-term vision for the RTO. Interviewees commented on the tendency of boards to focus on short-term issues and to neglect responsibilities such as mission setting for the organization. Interviewees also mentioned that some boards were reluctant to deviate from the agenda and issues presented from incumbent stakeholders. Board composition was cited as a limitation on the ability and willingness of boards to tackle complex issues.

56. *Public Advisor's Office*, CPUC, <https://www.cpuc.ca.gov/about-cpuc/divisions/news-and-public-information-office/public-advisors-office> (last visited Sept. 22, 2023); see also CAL. PUB. UTIL. CODE § 321 (statute mandating duties of the Public Advisor's Office).

57. *ICOMP Guide*, *supra* note 42, at 2.

58. CAL. PUB. UTIL. CODE § 1804(a) (2023).

59. *Id.* § 1804(a)(2)(A)(I-ii).

60. *ICOMP Guide*, *supra* note 42, at 6, 12.

61. *Id.* at 5.

62. CAL. PUB. UTIL. CODE § 1804(e) (2023).

63. *Id.* § 1804(e).

Direct access to the board is an important element of facilitating effective participation. The value of direct access is elevated when there is a strong stakeholder-board relationship. That relationship is affected by the composition of the board. Providing parties with the opportunity to speak directly to the board is critical, but the history, experience, and interests represented by the members of the board is equally important. The experiences represented on the board must match the goals and purposes of the organization. In this section, we examine the potential of Federal Energy Regulatory Commission (FERC) to act based on its history and the options for RTOs to lead, but first we start with the importance of functional diversity and two options for increasing the function diversity of RTO boards.

1. Importance of Board Functional Diversity

Board diversity, and specifically functional diversity, can improve board performance and decision-making. Functional diversity refers to the backgrounds of the different board members and the differences in experience, knowledge, and skills that they bring to the organization.⁶⁴ A diverse group of directors has a wider range of outlooks, opinions, knowledge, and skills that can facilitate decision making and problem solving.⁶⁵ A study of corporate board members on the Financial Times Stock Exchange concluded that the “[f]unctional experience of roles performed and the industry in which board members are engaged professionally influence board members’ perspectives, actions, ability to contribute in boards, and as a result, board effectiveness.”⁶⁶ Other research into governing boards composed of decision makers with diverse functional backgrounds can have shared goals, but different worldviews push board members to acknowledge and reconcile dissimilar assumptions underlying issues.⁶⁷ The action of doing so can improve consensus making and decision outcomes.

Improving functional diversity of RTO boards would address a couple of issues identified by interviewees. Multiple interviewees noted the tendency of boards to avoid complex problems and to favor shorter term solutions. Functional diversity provides the board with an enhanced skill set and deeper intellectual capital. Boards composed of individuals with similar backgrounds are at a higher risk of developing groupthink. Groupthink is where members of a group strive towards unanimity and solidarity which can override the motivation to fully assess alternative options.⁶⁸ Research has shown that boards with varied professional experiences translates into diverse thinking styles which boosts the intellectual capital of

64. Rita Goyal et al., *Improving Corporate Governance with Functional Diversity on FTSE 350 Boards: Directors’ Perspective*, 3(2) J. CAP. MKT. STUD 113, 115, 117-18 (2019) [hereinafter Goyal et al.].

65. David Rock & Heidi Grant, *Why Diverse Teams Are Smarter*, HARV. BUS. REV. (Nov. 4, 2016), <https://hbr.org/2016/11/why-diverse-teams-are-smarter>; Lu Hong & Scott E. Page, *Groups of diverse problem solvers can outperform groups of high-ability problem solvers*, 101(46) PROC. NAT’L ACAD. SCI. U.S. 16385, 16389 (Nov. 16, 2004), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC528939/> [hereinafter Hong & Page].

66. Goyal et al., *supra* note 64, at 122.

67. Susan Mohammed & Erika Ringseis, *Cognitive Diversity and Consensus in Group Decision Making: The Role of Inputs, Processes, and Outcomes*, 85.2 ORG. BEHAV. & HUM. DECISION PROCESSES 310, 311 (2001).

68. *Only Skin Deep? Re-examining the Business Case for Diversity*, DELOITTE 13 (Sept. 2013) https://www.ced.org/pdf/Deloitte_-_Only_Skin_Deep.pdf.

the board and improves its problem-analysis and solving ability. Boards' members with differing backgrounds have different perspectives can change how information is digested, processed, and discussed which can lead to greater role-effectiveness.⁶⁹ Boards composed of members with similar functional backgrounds can create an environment where a common perspective leads to similar solutions to problems.⁷⁰ Furthermore, research indicates that there is a performance benefit in recruiting a functional diverse group of individuals over a group of the best performing individuals.⁷¹ As the complexity of the issues facing RTOs increases, so must the board's ability to adopt different viewpoints and perspectives on how to address problems.

Interviewees also commented that boards should better reflect the composition of the stakeholders. The public interest purposes of the board can be more effectively accomplished if the board is able to connect with different stakeholders, especially those who are not market participants. Functional diversity can boost board effectiveness by adding to the range of professional networks represented on the board. Board members are often recruited for their networks and not just for their competencies.⁷² Recruiting board members for their relational capital and for their intellectual capital improves the ability of the board to access external resources and to communicate with all potential stakeholders.⁷³ A board with more connections to the different stakeholders is better positioned to listen and respond to the different concerns and opinions of stakeholder groups. eNGOs may only have limited opportunities to speak to and meet with the board.⁷⁴ This increases the importance of having board members with varied professional networks who can import different viewpoints into every board meeting.

Board independence can be improved with greater functional diversity. Functional diversity can help RTOs overcome any potential principal-agent issues. A principal-agent problem can develop when the interests of the agent do not align with the interests of the principal.⁷⁵ James et al. identified that the presence of a principal-agent problem in RTOs could limit the ability of RTOs to adopt market rules that enhance efficiency.⁷⁶ In that report, interviewees expressed concern about how the misalignment of objectives between RTO staff and RTO boards could lead to RTO staff advancing positions that did not serve the public interest purposes which guide the board's decision-making.⁷⁷

Functional diversity can address some of the root causes of the principal-agent problem by giving the board a more complete set of tools. A potential source

69. Goyal et al., *supra* note 64, at 123.

70. *Id.* at 124.

71. Hong & Page, *supra* note 65, at 5.

72. Goyal et al., *supra* note 64, at 124.

73. *Id.*

74. For example, PJM's Public Interest Environmental Organization User Group has one 3-hour meeting per year with the board. See *PJM Public Interest Environmental Organization Users Group Charter*, PJM 5 (Jan. 5, 2021), <https://www.pjm.com/-/media/committees-groups/user-groups/pieoug/postings/pieoug-charter.ashx>.

75. Kathleen M. Eisenhardt, *On Agency Theory: An Assessment and Review*, 14(1) THE ACAD. MGMT. AND REV. 57, 58 (Jan. 1989).

76. James et al., *supra* note 4, at 17.

77. *Id.*

of the principal-agent problem is the information asymmetry derived from the accumulation of institutional capacity within the staff who have significantly longer tenure with the RTO than board members who may only serve for a limited period.⁷⁸ While it is unlikely that the information asymmetry can be eliminated, what can be done is to create the conditions and capacity within the board to question the assumptions of RTO staff on different matters. Functional diversity boosts the intellectual capacity of the board by adding different thinking styles and perspectives which can break up the tendency for groupthink and create an environment where boards are less likely to assume the positions promoted by staff and stakeholders without sufficient scrutiny.⁷⁹

2. Role of FERC

FERC has addressed board governance and responsiveness in the past and could do so again. In October 2008, FERC issued Order 719, Wholesale Competition in Regions with Organized Electric Markets,⁸⁰ to improve the operation of organized wholesale electric markets in the areas of demand response and market pricing during periods of operating reserve shortage, long-term power contracting, market-monitoring policies, and the responsiveness of RTOs and ISOs to their customers and other stakeholders.⁸¹ Order 719 was an acknowledgement of the lack of specificity provided in Orders 888 and 2000 on RTO board governance requirements and the need to provide additional direction on facilitating stakeholder input.⁸² In Order 719, FERC acknowledged that Orders 888 and 2000 did not mandate specific board governance requirements out of a concern that any such mandates would be counterproductive during the early state of RTO formation and that it would allow governance structures to be developed that reflected regional needs.⁸³ When FERC revisited board governance, it required RTOs and ISOs to establish, or demonstrate that they had, a means for customers and other stakeholders to have a form of direct access to the board with the purpose of increasing the board's responsiveness to those entities. FERC defined responsiveness as the board's willingness "to directly receive concerns and recommendations from customers and other stakeholders, and to fully consider and take action in response to the issues that are raised."⁸⁴ While RTOs can act on their own initiative to reform how boards are selected and to integrate more diverse representation onto their boards, only FERC can establish uniform guidance for all markets.

Since FERC issued Order 719, the complexity of issues before RTOs has only grown. RTOs are tackling generation, transmission, and distribution system technology changes, ever shifting federal and state energy law and policy, and the entry and exit of market participants. Grappling with these issues requires hearing

78. *Id.* at 17.

79. Goyal et al., *supra* note 64, at 124.

80. Order No. 719, *Wholesale Competition in Regions with Organized Electric Markets*, 125 FERC ¶ 61,071 (2008).

81. *Id.* at P 1.

82. *Id.* at P 248.

83. *Id.* at PP 248-49.

84. Order No. 719, *supra* note 80, at P 247.

from a diversity of interests and accommodating a multiplicity of viewpoints. To do so effectively requires gathering input from all interested parties, but it also requires a board with sufficient diversity to represent or balance a diversity of interests. While Order 719 focused on providing greater responsiveness to customer and stakeholder concerns, FERC opted to forego a one-size-fits-all approach to accommodate the varying structure and needs of each regional entity.⁸⁵ Order 719 did not offer direction on how boards should be constructed to maximize a diversity of viewpoints, experience, and expertise.⁸⁶ While FERC is unlikely to provide specific directions on what perspectives and characteristics should be found on a board, it could offer guidance on the nomination and selection of potential candidates to the board to maximize functional diversity.

3. Improving Functional Diversity

Our research identified two potential opportunities for RTOs to improve the functional diversity of their board. The first is to ensure that there are director positions reserved for specific stakeholder groups. The second is to expand who can nominate and vote on candidates to the board of directors.

C. RTO Board Structures and Board Member Selection Processes

The diversity in the composition of RTO boards and in the process for selecting directors creates an opportunity for comparison and identification of best practices in curating functional diversity. This section compares board composition requirements, and director nomination and selection procedures in California Independent System Operator (CAISO), Independent Operator System New England (ISO-NE), and Electric Reliability Company of Texas (ERCOT). It also examines board composition requirements for Vermont's transmission company and the California Energy Commission as potential alternatives to existing RTO practices. The section concludes with analysis of how the Western Energy Imbalance Market and Western Power Pool ensure that public interest groups have input into the nomination and selection process.

As is evidenced by the variation in processes, board diversity is greatly influenced by who nominates board members and the rules governing the composition of the board. The degree of political control of board composition and selection processes varies considerably. Some organizations engage with stakeholders to select nominating committees and board members while other organizations are subject to greater top-down control. Some organizations seek specific types of expertise while other organizations seek representation from specific sectors or with specific backgrounds.

1. CAISO

CAISO lists desirable types of expertise for its board members and includes public interest groups in the nominating process. In CAISO, members of the Board of Governors are appointed by the Governor and confirmed by the State

85. *Id.* at P 250.

86. *Id.* at PP 250-51.

Senate. That is the final step of a process that facilitates and receives input from public interest groups. The process starts with the Board Nominee Review Committee reviewing a list of potential Board candidates that was prepared by a search firm.⁸⁷ The search firm is tasked with seeking out candidates that meet specific qualifications such as electric industry expertise, markets expertise, general corporate/legal/financial expertise, and public interest expertise.⁸⁸ Additional guidance is given to the search firm by listing the types of backgrounds that may meet the public interest expertise requirement.⁸⁹ The search firm is also required to seek candidates that balance the existing expertise contained on the Board.⁹⁰ The list of candidates is then presented to the Nominee Review Committee who will review and rate the list of candidates and provide their ratings to the Governor. The structure of the Nominee Review Committee is established in CAISO policy with six different sectors being represented, including public interest groups (e.g., consumer advocates, environmental groups, and citizen participation groups) which are actively involved in the ISO balancing authority area.⁹¹ Each sector identifies a sector lead and five other individuals to serve on the Committee.⁹²

2. ISO-NE

ISO-NE suggests that Board members have specific expertise and experiences, but it does not establish requirements for board diversity. Under ISO-NE's Participant Agreement, the ten-person board "shall possess a cross-section of skills and experience" and an illustrative list is given which includes experience in public policy, renewable energy, and environmental affairs.⁹³ However, there is no requirement to recruit directors with a specific set of skills or experience other than requiring that at least three directors have prior relevant experience in the electric industry.⁹⁴ When it comes time to replace a board member, a nominating committee is formed which includes up to seven members of the ISO Board, up to six members of the New England Power Pool (NEPOOL) Participants, and one representative of the New England Conference of Public Utility Commissioners.⁹⁵ The Nominating Committee develops a slate of candidates for election as voting directors and presents the slate to the Participants Committee for a vote.⁹⁶ The

87. *Board Selection Policy Version # 5.1*, CAISO § 4.2 (Aug. 17, 2022), <http://www.caiso.com/Documents/Board-Selection-Policy.pdf> [hereinafter CAISO].

88. *Id.* § 4.1.

89. *Id.*

90. CAISO, *supra* note 87, § 4.1.

91. *Id.* at § 4.2.

92. *Id.*

93. *Participants Agreement among ISO New England Inc. as the Regional Transmission Organization for New England and the New England Power Pool and the entities that are from time to time parties hereto constituting the Individual Participants*, ISO-NE § 9.2.2 (Jan. 2011), https://www.iso-ne.com/static-assets/documents/2015/10/parts_agree.pdf [hereinafter *ISO-NE Participants Agreement*].

94. *Id.*

95. *Id.* §13.1.2.

96. *Id.* § 13.1.5.

slate must win at least 70% of the aggregate Sector Voting Shares to receive the endorsement of the Participants Committee.⁹⁷

3. ERCOT

In ERCOT, the composition of the Board of Directors has less flexibility and no specific positions for public interest groups. ERCOT's Board composition requirements and director selection process were amended following the grid failures incurred during Winter Storm Uri.⁹⁸ ERCOT's board still consists of eleven members, but instead of the stakeholders selecting the different members, the directors are now appointed to the Board by the State of Texas' ERCOT Board Selection Committee.⁹⁹ The Board Selection Committee consists of three members, with the Governor, Lieutenant Governor, and Speaker each holding the power to appoint one member.¹⁰⁰ The composition of the board has also changed. Prior to the 2021 amendments, specific seats board were reserved for the different market participant segments with three seats designated for unaffiliated members.¹⁰¹ Seats were reserved for independent generators, investor-owned utilities, power marketers, retail electric providers, municipal owned utilities, electric cooperatives, industrial consumer interests, large commercial interests, and five members unaffiliated with any market segment and selected by the other members of the governing body generators.¹⁰² The unaffiliated members were given three-year terms on the Board while the segment-specific representatives received one-year terms.¹⁰³ Public interest groups were only eligible for an unaffiliated seat and had to be selected by the other members of the governing body. After the amendments, the reserved seat format was replaced by a requirement to select eight members with executive-level experience in any of the following professions: finance, business, engineering, trading, risk management, law, or electric market design.¹⁰⁴ Each member of the Selection Committee and the Governing Body must be a resident of the State of Texas.¹⁰⁵ To maintain its certification as an independent organization, the Governing Body is not permitted to contain more than two members who are employed by an institution of higher education.¹⁰⁶

4. Vermont Electric Power Company

Other energy system governance boards do reserve seats for representatives of public interest groups. The Vermont Electric Power Company (VELCO),

97. *ISO-NE Participants Agreement*, *supra* note 93, § 13.2.1.

98. Spencer Grubbs, *A Review of the Texas Economy, Winter Storm Uri 2021 – The 87th Legislature Takes on Electricity Reform*, COMPTROLLER. TEX. GOV. 2-3 (Oct. 2021), <https://comptroller.texas.gov/economy/fiscal-notes/2021/oct/winter-storm-reform.php>.

99. *Board of Directors*, ERCOT, <https://www.ercot.com/about/governance/directors> (last visited Sept. 23, 2023) [hereinafter *Board of Directors*].

100. TEX. UTIL. CODE ANN. §39.1513(a) (West 2021).

101. *Board of Directors*, *supra* note 99.

102. S.B. 2, 87th Legis., Reg. Sess. (Tex. 2021).

103. *Id.*

104. TEX. UTIL. CODE ANN. §39.151(g-1) (2021).

105. *Id.* §39.1513(b).

106. *Id.* §39.151(g-4).

which oversees the bulk transmission system in Vermont, has a thirteen-person board on which three seats are appointed by the Vermont Low Income Trust for Electricity (VLITE).¹⁰⁷ VLITE is a non-profit, public benefit corporation created as part of a merger approval between Vermont's two largest investor-owned utilities in 2012.¹⁰⁸ As part of the agreement, VLITE received an ownership interest in VELCO that provides significant dividend income that is used to fund projects and initiatives in Vermont.¹⁰⁹

5. California Energy Commission

California Energy Commission commissioners are appointed in the same fashion as the CAISO Board of Governors, the Governor of California appoints, with Senate confirmation, each of the five commissioners. However, unlike CAISO, the commissioners must come from and represent specific areas of expertise: law, environment, economics, science/engineering, and the public at large.¹¹⁰

D. Building Functional Diversity into Board Selection Processes

Changing the composition and thus the representativeness of a board often starts with how the board members are selected. The process for nominating and presenting potential candidates for membership on governing boards is a critical opportunity for addressing functional diversity. The following examples from the Western Energy Imbalance Market and the Western Power Pool highlight the process can be designed to give greater representation and voice to public interest groups.

1. Western Energy Imbalance Market

The Western Energy Imbalance Market (WEIM) is an example of how RTO governance can incorporate public interest organizations into the processes for identifying and nominating individuals to join the board of directors. The Western Energy Imbalance Market was the first real-time energy market in the western United States; established in 2014 by the CAISO, WEIM connects balancing authorities in ten states and two countries and provides region-wide grid reliability services.¹¹¹ In 2015, the California ISO adopted the Charter for Energy Imbalance Market Governance, which established the five-member EIM Governing Body, its responsibilities, mission, and procedures.¹¹² The Charter states that Members of the EIM Governing Body are to be selected in accordance with “the Selection Policy for the EIM Governing Body.”¹¹³

107. *Board of Directors*, VELCO (2023), <https://www.velco.com/about/leadership/board>.

108. *The History of VLITE*, VLITE (2023), <https://vlite.org/the-history-of-vlite/>.

109. *Id.*

110. *Commissioners*, CAL. ENERGY COMM’R, <https://www.energy.ca.gov/about/commissioners> (last visited on Sept. 20, 2023).

111. *About*, W. ENERGY IMBALANCE MKT (2023), <https://www.westerneim.com/Pages/About/default.aspx> (last visited Sept. 25, 2023).

112. *Charter for Energy Imbalance Market Governance*, CAISO (Sept. 23, 2021), <https://www.westerneim.com/Documents/CharterforEnergyImbalanceMarketGovernance.pdf> [hereinafter CAISO *Charter*].

113. *Id.*

The Selection Policy ensures that the voices and votes of public interest groups will shape the composition of the EIM Governing Body. The Selection Policy requires that the Members of the Governing Body are selected by a Nominating Committee and that the Nominating Committee contains representatives of specific stakeholder group.¹¹⁴ The Nominating Committee is comprised of eight members, each representing a specific sector or group: “Participating Transmission Owners, Publicly Owned Utilities; Suppliers and Marketers of Generation and Energy Service Providers; the Body of State Regulators” (a body comprised of one representative from a state public utility commission with a regulated utility that is participating in the EIM); and Public Interest Groups and Consumer Advocates.¹¹⁵ The Public Interest Groups and Consumer Advocates sector includes “all public interest or consumer advocate groups that are actively involved in energy issues within the balancing authority area of the ISO or an EIM Entity,”¹¹⁶ a definition which restricts the potential participants to the EIM’s geographic area. Members of each sector are authorized to develop their own procedures for selecting their representative and the terms of service.¹¹⁷ Operating on consensus, Committee members with voting privileges - the members drawn from the EIM Governing Body and ISO’s Board of Governor do not have voting privileges - present a slate of candidates to the Governing Body for final approval.¹¹⁸ The decision on the slate of candidates is by consensus, thus ensuring that each sector has an equal voice in the decision-making process.

The candidate selection process can be tailored to build diversity on the board. The Selection Policy lists the professional and personal qualifications that candidates should have. Governing Body members should have broad expertise in the following areas: the electric industry at an executive level; markets; and general corporate/legal/financial.¹¹⁹ Potential candidates are expected to have demonstrated excellence in their areas of expertise and should optimally reflect a diverse background and hold a diversity of viewpoints.¹²⁰ The executive search firm that will identify and vet candidates for the Nominating Committee is specifically instructed to consider candidates “with senior executive experience . . . provided that they otherwise have the relevant background.”¹²¹ The Nominating Committee can also provide further instruction to the search firm on the specific qualifications and characteristics it would like used to identify potential candidates.¹²² This ability, while optional, allows for the Nominating Committee to expand upon both the range of experiences and expertise, and upon the personal characteristics of potential candidates. If the directions on which attributes the

114. *Selection Policy for the EIM Governing Body, Version # 1.2*, CAISO 2 (July 15, 2021), https://www.westerneim.com/Documents/SelectionPolicy_EIMGoverningBody.pdf [hereinafter *CAISO Selection Policy*].

115. *Id.* at 2-3.

116. *Id.* at 3.

117. *Id.* at 4.

118. *CAISO Selection Policy*, *supra* note 114, at 8.

119. *Id.* at 6-7.

120. *Id.* at 7.

121. *Id.*

122. *CAISO Selection Policy*, *supra* note 114, at 5.

search firm should target come from the Nominating Committee, it makes sense that a Nominating Committee with greater functional diversity is more likely to propose characteristics that will improve the functional diversity of the Governing Body.

This process allows for the Nominating Committee to enhance the desired experience and expertise of potential board members. For example, in a March 2022 posting seeking candidates for a Governing Body member, the listing contained additional types of potential backgrounds including expertise in electric transmission systems operations and federal or state regulatory or policy.¹²³ The posting also details the types of personal characteristics that candidates should possess including the ability to view situations from different perspectives, forward thinking, broad perspectives, and intellectual inquisitiveness.¹²⁴ Characteristics that when paired with the requisite expertise will enhance the functional diversity of the Governing Body.

2. Western Power Pool – Western Resource Adequacy Program

The Western Power Pool's (WPP) efforts to develop a governance structure for the Western Resource Adequacy Program (WRAP) provide additional support for how the Western EIM has carved out dedicated positions for public interest organizations. WRAP is an effort to develop a governance structure for a regional energy market in the West. The WPP's tariff, including proposed governance structure, was filed in August 2022 with FERC and approved in February 2023.¹²⁵ The WPP explained that after the tariff is approved, "it will amend its bylaws to specify" the nomination process for members of the Board.¹²⁶ On May 26, 2023, WPP issued proposed bylaws which included the structure and function of the Nominating Committee.¹²⁷

The process for identifying and selecting candidates for the board is very similar to the nominating committee structure developed by the Western EIM with only a slight modification. However, there are a couple of key differences including one that ensures the public interest organizations will have direct input into the nomination process. As in the EIM, there are specific slots on the nominating committee reserved to different sectors. In the EIM, there were eight positions on the nominating committee and one position was allocated to Public Interest Groups and Consumer Advocates. In WRAP's proposed bylaws, the nominating committee size is expanded to have fourteen individuals representing twelve different sectors.¹²⁸ Instead of sharing a committee slot, public interest organizations

123. W. Energy Imbalance Mkt., *Confidential Position Specification: Independent Non-Executive Governing Body Member (WEIM)*, CAISO 5-6 (Mar. 2023), <https://www.westerneim.com/Documents/WesternEIMGoverningBody-PositionSpecification.pdf>.

124. *Id.* at 6-7.

125. *Northwest Power Pool*, 182 FERC ¶ 61,063 at P 1 (2023); letter from Wright & Talisman to Hon. Kimberly D. Bose, *Northwest Power Pool d/b/a Western Power Pool Docket No. ER22-000, Submission of Tariff to Establish Western Resource Adequacy Program*, 48 (Aug. 31, 2022) [hereinafter Wright & Talisman].

126. 182 FERC ¶ 61,063 at P 32; Wright & Talisman, *supra* note 125.

127. *Bylaws of Northwest Power Pool (dba Western Power Pool)*, WPP § 4.12 (Draft May 26, 2023, 3:39 PM) [hereinafter WPP].

128. *Id.*

receive one position on the nominating committee and there is a position reserved for a retail advocacy group representative and a position reserved for an industrial customer advocacy group representative.¹²⁹ The Nominating Committee is expected to adhere to specific guidelines in its selection process that are designed to increase the diversity of the members of Board. Selections are expected to ensure that there is not a predominance of Directors who specialize in one subject area.¹³⁰ The Board, in conjunction with the Nominating Committee, has the authority to “establish written policies that include additional criteria for” desired “qualifications of directors and on the composition of the board.”¹³¹

3. Summary

Our review of different board nomination and selection processes show that there are simple steps that can be taken to formalize the participation of public interest organizations. Board diversity is a function of the process for selecting boards and selecting who nominates boards. The authorities given to RTO boards is considerable and the challenges that boards must deal with are growing. Numerous studies and peer-review papers demonstrate that a more diverse board is better able to grapple with complex issues because it has a greater range of perspectives, experiences, and expertise to draw upon. Allocating slots in the nominating and selection committees for public interest organizations ensures that a vital stakeholder perspective is included in the process of how board members are chosen.

E. Recommendations for Improving Transparency

At the core of effective participation in RTO governance is access to information and access to decision-making processes and decision-makers. In this section, we discuss how RTO governance processes can and do differentiate between who gets access to information and who gets access to key processes, and how that creates barriers to participation. Our interviewees repeatedly told us how difficult it is to be an informed participant in RTO governance if one does not have access to key information and key processes. Our interviewees also highlighted how the administration of RTO governance processes impairs their ability to effectively participate. Administrative barriers vary by region, but many issues were repeated by interviewees working in different RTOS. Some of the administrative barriers identified include being excluded from certain meetings, not having access to key planning materials, the lack of meeting transcripts and recordings, the absence of any obligation to respond to all comments received on a proposal, the challenge of identifying who voted for or against a proposal, and the lack of explanation to support RTO decisions and votes.

1. The Importance of Transparency for Stakeholders

The discussion of transparency in RTO governance processes must start with the requirement to be transparent. Multiple interviewees presented the position

129. *Id.* § 4.12(g).

130. *Id.* § 4.12.

131. WPP, *supra* note 127, § 4.2.

that RTOs perform a public function in the public interest. Because of this, they argue that RTOs should be subject to the same rules as other public organizations, like FERC. FERC decisions are subject to judicial review and thus its order make findings of fact as it must build a record that can withstand a court challenge.¹³² For an RTO, that means having a standard of more fully justifying decisions whether it be through compliance with the Administrative Procedures Act (APA), or adoption of similar rules, on providing reasons for decisions that are based on supportable evidence/balance of evidence, providing access to the information used to make decisions, and providing access to the methodologies and the results of analyses. The requirement for transparency in public organizations does not fully or easily transfer to RTO governance because of the organizational structure of RTOs. As numerous commenters have stated, RTOs are quasi-governmental organizations or more specifically, quasi non-governmental organizations¹³³ in which a private organization is assigned attributes normally associated with the government sector.¹³⁴ An RTO is neither a governmental agency nor is it a wholly private entity. It acts similar to a utility when operating the transmission grid, which could be a private entity, and more like a regulator when administering markets and planning processes, similar to a government agency.¹³⁵

RTO governance is structured to create accountability to stakeholders. RTOs are not accountable to the public and there is limited accountability to state governments, which differs between multi-state and single state RTOs. RTOs are not self-regulating industries operating without government oversight.¹³⁶ RTOs are accountable to FERC, but FERC is limited in its ability to dictate RTOs board compositions and to influence RTO filings.¹³⁷ It is the stakeholders and RTO staff who shape and guide the development of rules and who participate in and direct planning processes. If RTOs are to be accountable to their stakeholders, then transparency for all stakeholders is critical. Inconsistent access to information and processes for different stakeholder groups can translate into inconsistencies in the ability to effectively participate. Furthermore, inconsistent or unequal access to information and processes can exacerbate existing resource burdens that already constrain participation from eNGOs and other public interest groups.

132. Review of Orders, 16 U.S.C. § 8251(b) (2005).

133. Dworkin & Goldwasser, *supra* note 4, at 555-56; Simeone, *supra* note 4, at 2, 22; Travis Kavulla, *R Street Policy Study No. 180, Problems in Electricity Market Governance: An Assessment*, R STREET 5 (Aug. 2019), <https://www.rstreet.org/wp-content/uploads/2019/08/FINAL-RSTREET180.pdf>.

134. Kevin R. Kosar, *The Quasi-Government: Hybrid Organizations with Both Government and Private Sector Legal Characteristics*, CONG. RSCH. SERV. 2 (June 22, 2011), <https://sgp.fas.org/crs/misc/RL30533.pdf> (discussing the differences between quasi-governmental organizations and quasi non-governmental organizations and provides an extensive list of resources on the topic in comparative international literature).

135. Simeone, *supra* note 4, at 22.

136. Dworkin & Goldwasser, *supra* note 4, at 578-79.

137. *NRG Power Mktg., LLC v. FERC*, No. 15-1452, slip op. at 3 (D.C. Cir. 2017) (holding that FERC's ability to make modifications to Section 205 proposals is limited); *California Indep. Sys. Operator Corp. Petitioner v. FERC*, No. 02-1287, slip op. at 2, 6 (D.C. Cir. 2004) (holding that FERC has no authority to replace the selection method or membership of the governing board of an ISO or RTO); *Atlantic City Elec. Co. v. FERC*, No. 97-1097, slip op. at 4, 6 (D.C. Cir. 2002) (holding that FERC lacked the authority to require approval of transmission owner withdrawal from an ISO).

2. Transparency in How to Participate

Transparency is a necessary element in facilitating participation where it matters. Multiple interviewees told us that the most important place to participate in RTO stakeholder governance was where issues were being discussed and proposals were being developed. Waiting to participate until the voting stage, was a strategy guaranteed to limit impact and the ability to influence outcomes.

Transparency in RTO stakeholder governance should start with transparency in the actual process of participating in stakeholder governance. Numerous interviewees commented on the complicated and complex nature of stakeholder governance processes and how it could be difficult to navigate complicated system of RTO committees and understanding how a proposal moves from discussion to vote. This complexity is magnified when attempting to work between different RTOs as each RTO has its own unique governance structure which requires participants with interests in issues in multiple RTOs to learn the nuances of each organization. A couple of examples highlight the complexity and uniqueness of RTO governance structures. SPP's Organizational Chart contains thirty-one committees, working groups, user forums, and advisory groups with additional task forces and subgroups.¹³⁸ PJM has sixteen committees, one user group, five forums, sixteen subcommittees, and nine task forces.¹³⁹ Conversely, CAISO has no stakeholder committee structure and proposals are developed through issue papers and working groups.¹⁴⁰

The impacts of lack of transparency are not equally distributed. Lack of transparency into the basic governance processes can create a barrier that excludes new entrants and can be particularly problematic for environmental justice groups seeking to participate for the first time.¹⁴¹ A simple way to reduce this burden is to publish and regularly update a stakeholder governance guide that explains an RTO's committee structure and governance processes. MISO and PJM have such

138. *Group Organizational Chart*, SPP, https://www.spp.org/documents/23115/spp_group_org_chart.pdf (last updated Aug. 25, 2023); *Stakeholder Groups*, SPP, <https://www.spp.org/stakeholder-groups/> (last visited Oct. 16, 2023).

139. *Committees*, PJM 1, <https://www.pjm.com/committees-and-groups/committees> (last visited Oct. 16, 2023).

140. *Policy Initiatives*, CAISO 1, <https://stakeholdercenter.caiso.com/StakeholderInitiatives> (last visited Sept. 20, 2023).

141. FERC has not issued any orders imposing similar requirements on RTOs. The environmental and public health impacts of energy generation disproportionately burden low-income and minority communities. With RTO management of dispatch procedures and control of market rules, they have considerable influence over which facilities operate and which communities are affected. Focus on competition and efficiency has often excluded consideration of environmental justice. See *FERC Chairman Acts to Ensure Prominent FERC Role for Environmental Justice*, FERC (Feb. 11, 2021), <https://www.ferc.gov/news-events/news/ferc-chairman-acts-ensure-prominent-ferc-role-environmental-justice> identifying need for action of environmental justice; *Glick Names Montana Cole to Top Environmental Justice Post at FERC*, FERC (May 20, 2021), <https://www.ferc.gov/news-events/news/glick-names-montina-cole-top-environmental-justice-post-ferc> (filling position of Senior Counsel for Environmental Justice and Equity); Notice, *Roundtable on Environmental Justice in Infrastructure Permitting: Second Supplemental Notice of Roundtable*, 88 Fed. Reg. 16618 (Mar. 20, 2023) (announcing Commissioner-led roundtable to discuss environmental justice and equity in FERC-jurisdictional infrastructure permitting processes); see James Moeller, *Public Utilities and Environmental Justice: Electric Restructuring and Deregulation and Low-Income Communities*, 21 U. D.C. L. REV. 1, 15 (2019).

guides, while the other RTOs do not have a single document that gathers information on the roles and responsibilities of different parties, describes how votes are conducted, shows how issues are prioritized, and collects key documents.¹⁴²

3. Issue Prioritization

Understanding how and where to participate unlocks the next potential hurdle to effective participation, knowing what issues are being discussed. The scope of issues that RTOs manage range from transmission planning, market participation rules, and the structure of energy and capacity markets. Stakeholders and interested parties should be able to contribute to which issues will be prioritized, easily identify what issues an RTO has prioritized, and track those issues through the proposal development and voting process. As a general practice, RTOs seek and incorporate stakeholder input into the development and prioritization of issues.¹⁴³ Stakeholder participation in the prioritization of issues allows for parties to express their preferences. An example of an open revision and comment process is CAISO's annual policy initiative roadmap. The roadmap captures the policy initiatives that the ISO will undertake in the following year and the approximate timelines for each initiative.¹⁴⁴ CAISO also maintains and twice a year updates its Policy Initiatives which contains current, planned, and potential policy initiatives that would require a stakeholder process. Stakeholders can propose potential policy initiatives throughout the year to be considered during the scheduled update.¹⁴⁵ The entire process and comment portal is open to the public.

Where there is variance between RTOs is in how those priorities are tracked and how stakeholders and members of the public can identify when and where issues are being discussed. RTOs should make it easy to track individual issues of interest. For example, PJM's issue prioritization tracker allows issues to be tracked across all PJM committees without searching specific stakeholder groups

142. The authors conducted a search for stakeholder governance guides in each RTO. While this information may be available, it is not collected into a single, easily locatable document. NYISO has a Stakeholder Governance Guide, but it does not contain the level of detail as the MISO and PJM guides. NYISO has a more detailed guide for market participants but that is focused toward a selection of total stakeholders. ERCOT also publishes an Overview of ERCOT Corporate Governance, but it does not contain granular information on participation practices. *Stakeholder Governance Guide*, MISO 10-12, 23-25, 27, 31 (May 6, 2009), <https://cdn.misoenergy.org/Stakeholder%20Governance%20Guide105455.pdf>; *PJM Manual 34: PJM Stakeholder Process*, PJM 31, 68-69, 73-75 (Jan. 25, 2023), <https://www.pjm.com/~media/documents/manuals/m34.ashx>; *Getting Started Guide: Market Participants & Stakeholders*, NYISO 4, <https://www.nyiso.com/documents/20142/2245428/2020-Getting-Started-Guide.pdf/d892e493-b99f-628c-9e6f-399933596efd?t=1602104467770> (last visited Sept. 28, 2023); see *Market Participants User's Guide*, NYISO 1 (Oct. 22, 2021), <https://www.nyiso.com/documents/20142/3625950/mpug.pdf>; *Overview of ERCOT Corporate Governance*, ERCOT 1-4, 9-13 (Jan. 18, 2022), <https://www.ercot.com/files/docs/2022/01/18/4-REVISED-Overview-of-ERCOT-Corporate-Governance.pdf>.

143. For example, in NYISO, the Budget & Priorities Working Group monitors progress on current project initiatives and prioritizes future projects, and in ISO-NE, the ISO's annual work plan incorporates feedback from stakeholders. *Budget & Priorities Working Group*, NYISO, <https://www.nyiso.com/bpwg> (last visited Sept. 28, 2023); *Annual Work Plan*, ISO-NE 1, <https://www.iso-ne.com/about/corporate-governance/annual-work-plan/> (last visited Oct. 20, 2023).

144. *Annual policy initiatives roadmap process – 2022*, CAISO 1 (May 11, 2021), <https://stakeholder-center.caiso.com/RecurringStakeholderProcesses/Annual-policy-initiatives-roadmap-process-2022>.

145. *Id.*

to monitor progress.¹⁴⁶ Once, stakeholders can track issues of interest, the next hurdle is to make sure that it is easy to follow when meetings are occurring. Including committee and working group meetings, RTOs conduct hundreds of meetings per year, which requires dedicated resources to track issues.¹⁴⁷ RTOs have public facing schedules detailing when meetings are scheduled, but that requires consistent monitoring by stakeholders. A method suggested during our interviews to alleviate the burden of knowing when a relevant meeting was occurring was to allow stakeholders and interested parties to subscribe to push notifications.

4. Meeting Participation and Access to Documents

Knowing when meetings are occurring and what issues are being discussed is the first step to effective engagement, but it must be paired with access to meeting materials and data sets and being allowed into meetings. Clarity in the presentation of this material and ease of access to the materials necessary to effectively participate in the discussions is critical to building more participation opportunities. Publicly available documents are a major step in reducing administrative costs that can become a barrier to participation.

Meeting materials should enhance participation of all stakeholders. This has not been the case. Several interviewees commented on the differential treatment of market participants and non-market participants in what information was made available. We propose a simple rule: Every stakeholder should have access to the same set of documents, meeting materials should provide sufficient detail for adequate preparation, and that transcripts and recordings of meetings should be made available. For example, in MISO, non-market participant stakeholders cannot sign non-disclosure agreements to gain access to key transmission planning documents.¹⁴⁸ Market participants can.¹⁴⁹ Based on our research interviews, we did not receive a clear articulation for excluding NGOs and it appears that the exclusion may be a carryover from who historically received access to this information, e.g., asset owners. Nor did we receive a clear explanation of a risk that would be created by providing access for eNGOs under the same conditions that market participants agree to. This practice put eNGOs and other public interest organizations at a disadvantage when participating in the MTEP Futures discussions, which is where the planning scenarios were developed. Lack of consistent meeting summaries and notes were another area identified by interviewees. Interviewees noted that RTO meeting agendas and minutes are typically sparse in their level of detail which can serve to limit engagement. To address this issue, RTO could prepare and share summaries of key meetings and governance decisions as well as sharing the schedule for upcoming meetings. This is what occurs in ISO-NE, which prepares and publicly distributes a written summary of each month's meeting of the

146. *Issue Tracking*, PJM, <https://www.pjm.com/committees-and-groups/issue-tracking> (last visited Oct. 20, 2023).

147. See James et al., *supra* note 4, at 14.

148. *NDA Descriptions*, MISO 1-2, <https://cdn.misoenergy.org/Non-Disclosure%20Agreement%20Types%20and%20Instructions68054.pdf> (last visited Oct. 2, 2023) (noting that only Members and Market Participants can sign the NDA and receive confidential information. eNGOs cannot become Members).

149. *Id.*

ISO Board and committees.¹⁵⁰ Multiple interviewees commented on the lack of transcripts and recordings of meetings, even meetings which are conducted in the public sphere. CAISO's Open Meeting Policy does allow for members of the public to record open sessions of Board meetings, but it does not establish a universal policy of meeting recordings.¹⁵¹ If the ISO chooses to record an open meeting, it is required to maintain the recording for thirty days following the date of the meeting and to allow members of the public to view at a time and location set by the ISO.¹⁵² As the COVID-19 pandemic pushed RTO meetings into the virtual sphere, adopting a policy of recording public meetings should not impose a significant technical or economic cost on the RTO. Furthermore, it would shift the administrative burden onto the party that is technically and economically capable to managing the task. The sheer number of meetings paired with institutional capacity challenges may prevent eNGOs and public interest organizations from attending live meeting sessions, but it does not lessen their interest in the discussions.¹⁵³ A system focused on building effective participation should meet stakeholders where they are and use available tools to strengthen engagement from all interested parties.

Every RTO must balance giving access to stakeholders and the public against protecting confidential information. Open meetings are the default policy in each RTO for committee and subcommittee meetings. For example, in MISO, Stakeholder meetings are open to all interested participants except for individual sector meetings discussing confidential or proprietary information.¹⁵⁴ In CAISO and the Western EIM, all meetings are to be conducted in accordance with CAISO's Open Meeting Policy.¹⁵⁵ There will always be a need for in camera sessions with restricted participation. CAISO and EIM meetings can be closed to the public, but

150. ISO New England Board of Directors, *ISO New England Governance Enhancements – Update to May 20, 2022 Memo*, ISO-NE 1-2 (July 6, 2022), https://www.iso-ne.com/static-assets/documents/2022/05/board_memo_to_nescoc_governance_enhancements_052022.pdf; see *Update on Recent and Upcoming Regional Activities*, ISO-NE (May 2022), https://www.iso-ne.com/static-assets/documents/2022/05/may_2022_necpuc_memo_final.pdf (The May 2022 memo can be viewed at ISO New England Board of Directors and contains a monthly summary.).

151. *Open Meeting Policy*, CAISO 3 (Mar. 26, 2010), <http://www.caiso.com/Documents/OpenMeetingPolicy-Redline.pdf>.

152. *Id.*

153. Benjamin A. Stafford & Elizabeth J. Wilson, *Winds of Change in Energy Systems: Policy Implementation, Technology Deployment, and Regional Transmission Organizations*, 21 ENERGY RES. & SOC. SCI. 221, 231 (2016). In 2009, PJM retained an independent facilitator to assess concerns regarding its governance and stakeholder processes. The Phase I report, published in October 2009, discussed the sheer number of meetings in the different RTOs (the report looked at PJM, MISO, NYISO, ISO-NE, and SPP) and identified that the number of meetings in each RTO ranged from a low of 184 in ISO-NE to a high of 611 in MISO. Johnathan Raab & Patrick Field, *An Assessment of PJM's Governance and Stakeholder Process*, RAAB ASSOC., LTD, CONSENSUS BLDG. INST. 12 (Oct. 1, 2009), <http://www.raabassociates.org/Articles/PJM%20GAST%20Final%20Phase%20I%20Report.pdf>.

154. *Stakeholder Governance Guide*, MISO 4 (May 17, 2021), <https://cdn.misoenergy.org/Stakeholder%20Governance%20Guide105455.pdf>.

155. CAISO *Charter*, *supra* note 112, at 7.

only when the specific circumstances detailed in the Open Meeting Policy are satisfied.¹⁵⁶ Under CAISO's Open Meeting Policy which mandates that the Board hold a vote to close meetings and to announce the general nature of the items to be discussed.¹⁵⁷ Multiple interviewees participating in other RTO governance processes stated they were often excluded from key meetings without receiving any reason for the exclusion. For example, SPP's bylaws mandate that meetings shall be open, but attendance can be limited by an "affirmative vote of the Organizational Group as necessary to safeguard confidentiality of information, including but not limited to Order 889 Code of Conduct requirements, personnel, financial, or legal matters."¹⁵⁸ Unlike CAISO, SPP bylaws contain no requirement to disclose the reason for closing the meeting. A requirement to provide a reason will enhance transparency and accountability while incentivizing the maximization of open meetings.

5. Transparency in the Decision-Making Process.

The final opportunity to increase transparency is to shine light into the decisions and the decision-making process. There are several opportunities to bring transparency into the decision-making process including how votes are recorded, disclosure of who is voting, and providing justification of decisions.

Board and committee votes are not required to be made public, which can obscure visibility into how different parties are voting. The onset of the COVID-19 pandemic brought changes into RTO Board and committee voting practices and many RTOs adopted a recorded vote policy as part of their shift to virtual governance practices. In ERCOT, the Technical Advisory Committee, which makes recommendations to the Board of Directors, switched from a practice of conducting mainly oral votes to have recorded votes.¹⁵⁹ If RTOs can make this switch to facilitate virtual participation in governance processes, then there is no reason not to continue this practice as RTOs return to in-person meetings. The TAC Procedures detail different vote recording requirements based upon how voting is conducted. Votes can be taken in-person, by electronic mail, or remotely.¹⁶⁰ Under TAC's procedures, only remote voting must be validated while electronic mail votes can be tabulated with only the final tally being shared.¹⁶¹ It is common practice that lower-level committees, working groups, and task forces work on a consensus-based decision-making process on which proposals should advance. The lack of

156. *Id.* at 4-6. Meetings can be closed for discussions on ongoing litigation, on personnel matters, and where trade secrets, or confidential or proprietary information is being discussed. See *Open Meeting Policy*, CAISO 4-6 (2010), <http://www.aiso.com/Documents/OpenMeetingPolicy-Redline.pdf>.

157. *Id.* at 6. In matters of litigation, the ISO's legal counsel must prepare and submit to the Board a memorandum explaining the specific reasons for closing the session to the public. In all meetings closed to the public, the Board must announce the general nature of the item or items to be discussed in the session. *Id.* at 4-6.

158. *Southwest Power Pool Governing Documents Tariff*, SPP 3.5 (Apr. 19, 2022), <https://www.spp.org/documents/13272/current%20bylaws%20and%20membership%20agreement%20tariff.pdf>.

159. *Technical Advisory Committee*, ERCOT 1, <https://www.ercot.com/committees/tac> (last visited Oct. 2, 2023).

160. *TAC Meeting by Webex Only*, WEBEX CONF. 1 (Jan. 27, 2021), https://commondatastorage.googleapis.com/document-uploads-001/uploads/video/agenda_file/112168/1-27_ERCOT_TAC_1_.pdf.

161. *Id.*

recorded votes is intended to facilitate an open discussion of issues. Promoting open and honest discussion at the lower-level committees can be protected while taking other steps to boost transparency. For example, our interviewees noted that there was often a lack of clarity into who was participating in these committee meetings. RTOs allow alternative representatives and consultants to represent stakeholders and for stakeholders to cast proxy votes. While votes may not be recorded, at a minimum, parties should disclose who they are representing and if they are holding proxy votes from other stakeholders. Transparency in relationships can promote accountability without compromising open and honest discussions.

RTO board decisions are not subject to the same transparency requirements as FERC orders. Boards are not subject to the same duty as FERC to demonstrate that their decisions are based on substantial supporting evidence, nor are they required to consider and respond to all substantive comments received during the stakeholder feedback process. This runs counter to the requirements imposed upon FERC by the APA and Federal Power Act (FPA).¹⁶² FERC's obligation to comply with the APA was cited by multiple interviewees as a reason why they focused their resources and efforts at the Commission. In comparison, RTO decision making processes can be opaque and difficult for stakeholders to follow. For example, in CAISO, there is no obligation to discuss what alternatives were evaluated when determining which resources receive a Reliability Must-Run designation. CAISO is required to evaluate whether there are any more cost-effective options that could avoid the need for a Reliability Must-Run Contract, but it has no affirmative duty to disclose what options were considered.¹⁶³ Stakeholders could ask questions and seek this information, but that does not create an affirmative duty and instead shifts the burden of information seeking onto resource-constrained stakeholders. Clarity into the reasoning of the RTO enables more effective engagement from stakeholders seeking to advance options.

6. Summary

Transparency is a choice that must be actively taken and actively affirmed. RTO governance is designed to create accountability to stakeholders and accountability rests upon stakeholders have sufficient knowledge and information to exercise their rights. This section highlighted numerous steps that could instill transparency as a guiding value in RTO governance. Any of the steps taken individually would improve transparency, but multiple steps taken in concert can build a foundation for effective participation.

162. FERC's obligations under the APA are found in 5 U.S.C. § 706 (2013), which establishes that under the scope of review for courts reviewing federal agency action, a court shall hold unlawful and set aside agency actions, findings, and conclusions that are "arbitrary, capricious, and abuse of discretion, or otherwise not in accordance with law, and "unsupported by substantial evidence . . ."; 16 U.S.C. § 8251(b) (2005) establishes any party to a FERC proceeding may seek judicial review of the order in the U.S. court of appeal of any circuit where it is located or has its principal place of business or in the in the U.S. Court Appeals for the District of Columbia and that the findings of the Commission will be conclusive if supported by substantial evidence.

163. *California Independent System Operator Corporation Fifth Replacement Electronic Tariff*, CAISO §41.3 (Aug. 15, 2022), <http://www.caiso.com/Documents/Section41-Procurement-of-ReliabilityMust-RunResources-asof-Aug15-2022.pdf>.

F. Recommendation for RTO Governance Reform and Addressing Complex Issues

In this section, we revisit the statement of one of our interviewees that “a vote is a weak tool.” Voting is an important tool when it is attached to a comprehensive set of rights. In interview after interview, we heard about the importance and value of membership as the first step in enhancing participation and in curating opportunities to influence processes and outcomes. One interviewee summed it up as “[m]embership is key to participation.” But membership alone does not guarantee equality and equity in participation rights, which is why this section starts with a discussion on membership and the different procedural and substantive rights attached to membership in the different RTOs. Next, the section addresses how stakeholder participation can be facilitated for specific, high-value processes by carving out participation opportunities for public interest and eNGO organizations. The section concludes with a focus on resolving complex issues and how that could be accomplished within and outside of the membership structure.

In the companion article, we reviewed and compared the different participation opportunities attached to membership in each of the seven RTOs. We also compiled the costs of becoming a member and maintaining membership. Lenhart and Fox completed a similar review of governance structure that compares RTOs across several different factors starting with governance structure and diving deeper into areas such as stakeholder opportunities to interact with their board, issue prioritization, and access to information.¹⁶⁴ In their review, Lenhart and Fox noted that their research relied exclusively on documents and did not collect data from RTO participants and that limited their ability to comment on “many current issues related to RTO governance or how institutional design works in practice.”¹⁶⁵ They highlighted that additional research could examine “the extent to which members actively participate in processes, strategic decisions about how and when to engage . . .”¹⁶⁶ Our interviews provide insight into these key questions and allowed us to zero in on specific leverage points for boosting effective participation by eNGOs.

Over the span of our interviews, we heard multiple suggestions on how to reform and improve RTO governance structures ranging from adjusting allocation of voting rights to adopting a hybrid governance model between the states and FERC to abolishing RTOs and starting over. Many of these comments were grounded in how the portfolio of responsibilities held by RTOs has become increasingly important, including planning for infrastructure to interconnect a massive build out of renewable energy generation. Much has been learned since the early days of RTO formation and given the increased importance of some of the RTO responsibilities these changes warrant a re-evaluation of what is the best form of stakeholder governance that supports inclusive, efficient, and effective decision-making.

164. Lenhart & Fox, *supra* note 6, at 1.

165. *Id.* at 11.

166. *Id.*

1. Votes Do Matter

Votes can and do matter and what voting sector eNGOs are placed in matters. eNGOs and public interest groups will only ever hold a small percentage of the total votes held by RTO stakeholders, but that should not mean that the votes can be diluted or minimized. MISO is the only RTO in which environmental organizations have their own sector.¹⁶⁷ PJM is the only RTO that does not allow eNGOs to become voting members.¹⁶⁸ In all the other RTOs that have formal stakeholder sectors, eNGOs, and public interest groups, are paired up with a variety of different stakeholders.

Our interviewees discussed the pressures of pairing eNGOs with other stakeholders who hold different interest, the impact of the influx of new stakeholders, and resistance to changing voting structures. A common pairing is to place eNGOs with groups that do not share the same perspectives and objectives. For example, in NYISO, environmental organizations are paired with Public Power and the two groups are assigned specific portions of the sector's votes. We heard in interviews how this structure reduces this incentive for cooperation and, in essence, creates two de facto sectors that do not work together the same way the other sectors do. Adding more pressure on the value of voting rights is the influx of new stakeholders into RTO governance processes. Those new members often end up in the same sectors as eNGOs, like in ISO-NE where environmental non-profits are placed in the End-User category which also contains state and local governments plus different industrial and manufacturing interests.¹⁶⁹ Interviewees also highlighted SPP's division of stakeholders into Transmission Owning and Non-Transmission Owning/Transmission Using for voting purposes in its Markets and Operations Policy Committee and Members Committee. This division creates two groups with significantly different membership levels, puts a wide range of diverse interests within the Non-Transmission Owning voting sector, and creates the risk that minority positions will be diluted. We fully acknowledge that it would be difficult to change the allocation of voting rights within existing RTOs. There would be considerable inertia to overcome as changes to sectoral categories, composition, or voting rights will require some groups to reduce their voting privileges so that other groups might gain additional rights. But, in a time where RTO expansion is a topic gaining momentum, the construction and composition of sectors should not simply be imported from existing governance structures without a full discussion of how to empower all voices and votes and how to ensure the rights of minority parties.

Protecting existing voting rights and ensuring that the votes of public interest groups are not diluted is a step that would maintain participation opportunities.

167. *MISO Region Engagement*, MISO 3, <https://www.misoenergy.org/stakeholder-engagement/miso-engagement> (last visited Sept. 22, 2023).

168. Mark James et al., *Incorporating Environmental Concerns into Wholesale Electric Markets: The Impact of Regional Transmission Organization Governance Models on eNGO Participation in Stakeholder Processes*, VT. L. SCH., INST. FOR ENERGY AND ENV'T 15-16 (2023), <https://appam.confex.com/appam/2020/media-file/ExtendedAbstract/Paper38208/James%20et%20al%20-%20APPAM%202020%20-%20eNGO%20Participation%20in%20RTO%20Governance%20-%20Draft.pdf>.

169. *Current Members NEPOOL Participants*, NEPOOL 1-8 (Aug. 1, 2023), https://nepool.com/participants/?_sectors=end-user&_per_page=-1.

Voting rights are still critical as even a small percentage can sometimes be the decisive vote on critical issues. For example, in NYISO, the 58% voting requirement can sometimes require public interest sector votes to reach the threshold even though public interest sector votes only account for 2% of the total stakeholder votes in NYISO.¹⁷⁰ While, as discussed above, NYISO's pairing of eNGOs and public power creates two separate groups within a single stakeholder group, the allocation of specific voting rights ensures that minority positions will not be overridden by the majority. In RTO sectors, this could be an option for managing the influx of new stakeholders, which are often concentrated in a small number of sectors such as in PJM where new membership growth was concentrated in two sectors.¹⁷¹

2. Improving Stakeholder Input Opportunities

Targeted participation opportunities are an option for empowering stakeholders with limited resources and capacity without changing voting rules. In our interviews, we asked what RTO governance processes were of most interest to the stakeholders and where did they focus their resources. The responses received included market rules for new generation resources, capacity market rules, and transmission planning. Participation in the early stages of these processes enables stakeholders to make recommendations and direct outcomes while key decisions are still being made and before proposals are finalized and voted on. As we were repeatedly told, by the time a proposal arrives at the voting stage there is often little that can be changed. Participation is connected to membership because of the attached privileges and rights that it offers. Membership enables access into meetings, the ability to make presentations to committees, the opportunity to participate in the working groups, subcommittees, and task forces that discuss issues and shape solutions, and to cast votes.

Participation opportunities should be easy to access and when possible formalized in the governance structure. Informal participation opportunities include the right to submit comments on governance proposals. Formal participation opportunities include the right to shape outcomes of governance processes. As we discussed earlier, significant differences in resources affect the ability to effectively participate in governance processes when the level of participation is connected to the ability to dedicate resources. This imbalance can be exacerbated by the nature of informal processes which can allow agency officials to favor these groups because of their historical relationship and perceived importance.¹⁷² The influence of transmission owners and generation owners was repeatedly cited in our interviews as creating outsized influence, beyond that guaranteed in the RTO tariff, bylaws, and business rules, especially for transmission owners based on the

170. Mark Seibert et al., *NYISO Governance: Frequently Asked Questions (FAQs)*, NYISO 5, <https://www.nyiso.com/documents/20142/1408883/NYISO-Governance-FAQ.pdf/471f13a1-5def-7358-b0a5-42221906ac0e?t=1546629718621> (last visited Sept. 22, 2023).

171. Simeone, *supra* note 4, at 34; James et al., *supra* note 4, at 15.

172. Elizabeth Baldwin, *Exploring How Institutional Arrangements Shape Stakeholder Influence on Policy Decisions: A Comparative Analysis in the Energy Sector*, 79.2 PUB. ADMIN. REV. 246, 247 (May 10, 2018), <https://onlinelibrary.wiley.com/doi/abs/10.1111/puar.12953>.

actual and perceived threat of departure from the RTO.¹⁷³ We also received comments that eNGOs were not seen as serious actors capable of contributing at the same level as market participants. In combination, these biases can be baked into governance processes unless active steps are taken to formalize participation opportunities and guarantee stakeholder input.

Formal participation opportunities on key committees should be reserved for public interest and eNGO organizations. Furthermore, the formal participation opportunities should not require executing other qualifying steps. For example, in MISO, the Steering Committee assigns issues to stakeholder groups for discussion and deliberation, assists in the development of the Advisory Committee agendas, provides advice and recommendations to the Advisory Committee regarding strategic plans, and annually reviews the Stakeholder Governance Guide and makes recommendations on revisions.¹⁷⁴ It is a powerful committee with significant duties and influence. The Steering Committee “consists of the Advisory Committee Leadership and the Chairs and Liaisons of the Entities reporting directly to the Advisory Committee and/or the Steering Committee.”¹⁷⁵ The Entities reporting directly to the Advisory Committee are the Resource Adequacy Subcommittee, Planning Advisory Subcommittee, Finance Subcommittee, Reliability Subcommittee, and the Regional Expansion Criteria and Benefits Working Group.¹⁷⁶ Representatives from those Entities and the two Advisory Committee Leadership positions make up the eight voting members of the Steering Committee. If an eNGO does not seek a Chair position and does not hold a leadership position on the Advisory Committee, then they will not have a vote on this key committee. If diversity of representation is to be encouraged, it should start with ensuring the governance structure ensures a right to participate in key committees. Reducing the burden on individual parties to create participation opportunities by standardizing and guaranteeing access for public interest and environmental groups would ensure a more diverse set of viewpoints is represented.

173. Ari Peskoe, *ISO-NExit: Exploring Pathways for a Utility's Withdrawal from New England's Regional Transmission Organization*, HARV. ELEC. L. INITIATIVE 2 (Apr. 3, 2020), <http://eelp.law.harvard.edu/wp-content/uploads/ISONExit-Memo.pdf> (discussing that FERC has approved or conditionally approved transmission utility withdrawals from an RTO in four separate proceedings). There have been numerous other explicit and implicit threats to withdrawal transmission utilities from an RTO, with some being made by individual utilities seeking better financial opportunities and some being issued by states seeking greater control over resource adequacy decisions. For an example of state threats, see Patrick Skahill, *CT taking 'a serious look' at exiting regional power market*, CONN. PUB. RADIO 1 (Jan. 16, 2020), <https://ctmirror.org/2020/01/16/conn-taking-a-serious-look-at-exiting-regional-power-market/> (discussing Connecticut's options in conflict with ISO-NE on how to achieve state climate goals); Amanda Durnish Cook, *La. Regulators Threaten MISO Departure over Tx Costs*, RTO INSIDER 1 (Oct. 21, 2021), <https://www.rtoinsider.com/articles/28914-la-regs-threaten-miso-departure-tx-costs> (discussing Louisiana's concerns about transmission expansion costs); Catherine Morehouse, *Maryland taking a 'serious look' at exiting PJM capacity market through FRR*, UTILITY DIVE 1 (Apr. 29, 2020), <https://www.utilitydive.com/news/maryland-taking-a-serious-look-at-exiting-pjm-through-fr-says-psc-chair/576957/> (discussing how Maryland, Illinois, and New Jersey all raised the possibility of leaving PJM over conflict with state clean energy goals).

174. *MISO Steering Committee Charter*, MISO 1 (Feb. 19, 2020), <https://cdn.misoenergy.org/2020%20SC%20Charter430976.pdf> [hereinafter *MISO Charter*].

175. *Stakeholder Governance Guide*, MISO § 6.1 (May 17, 2023), <https://cdn.misoenergy.org/Stakeholder%20Governance%20Guide105455.pdf>.

176. *MISO Charter*, *supra* note 174, at 2.

Diverse stakeholder participation in critical planning processes can influence RTO activities. Recent governance activity in MISO demonstrates how this can happen. The MISO Futures Development process produced forward-looking planning scenarios that were used to model future system needs. MISO's process has been applauded by eNGOs for its use of different assumptions to create a range of scenarios and pushed as a potential model for other planning regions to follow.¹⁷⁷ The Futures scenarios established different ranges of economic, policy, and technological possibilities for transportation, building, and industrial electrification over a twenty-year period.¹⁷⁸ Over a three-year long period, MISO hosted engaged stakeholders and the public in a series of workshops, information sessions, and public comment periods to produce the scenarios that would be applied to the MISO Transmission Expansion Plan cycles, the Long Range Transmission Plan Initiative, and other planning studies.¹⁷⁹ Stakeholder feedback pushed MISO to revise its assumptions on the role of storage, the level of penetration for renewable generation, and electrification trends.¹⁸⁰

3. When RTO Processes Don't Fit the Problem – Developing Alternative Methods for Discussing and Presenting Proposals

Some issues might not fit into existing RTO governance processes. We close our discussion of governance reforms with an exploration of alternative options for resolving complicated issues outside of the RTO governance process. The rigid nature and schedule of RTO governance processes does not always align with the complexity of the issue it is working on. Numerous interviewees commented on how as RTOs have taken on more complex issues, the governance processes have struggled to manage the growing complexity. Siloing in stakeholder governance processes can make it difficult to address complex issues that implicate different market functions and multiple stakeholder sectors. Cross-cutting issues can run into the rigidity of stakeholder governance organizational charts, which can limit the range of solutions presented and constrain input from interested parties. In this article, we have highlighted internal RTO efforts to develop governance processes that can address complex issues, including the MISO Futures Initiative. However, occasionally stepping outside of the RTO governance process may be the best way to start discussions on resolving complex issues.

The use of alternative processes for exploring and developing consensus on an issue is a way to enable engagement from different stakeholders and members of the public. When these alternative processes are employed, it is vital that they

177. Cullen Howe, *MISO Plans for a Clean Energy Future*, NRDC 9-10 (Mar. 25, 2022), <https://www.nrdc.org/experts/cullen-howe/miso-plans-clean-energy-future>.

178. *Future Planning Scenarios*, MISO 1, <https://www.misoenergy.org/planning/transmission-planning/futures-development>.

179. *Id.*

180. *MISO Futures – Final*, MISO 3-4 (Apr. 27, 2020), <https://cdn.misoenergy.org/20200427%20MTEP%20Futures%20Item%2002a%20Futures%20Presentation443760.pdf> (noting the changes in assumptions for percentages of state goals met, electrification, demand, and energy growth). The evolution of MISO's assumptions can be seen in how the draft and final Futures scenarios changed in response to stakeholder input. *Id.*

offer opportunities for eNGOs and other public interest organizations to meaningfully participate and contribute. We put forward the example of the New England Demand Response Initiative (NEDRI) as an alternative process that brought together a diverse group of stakeholders in a structured setting to produce recommendations on incorporating demand response resources into wholesale markets.

NEDRI is an example of how an inclusive and supportive participation governance model can be constructed to discuss a complex energy markets issue. NEDRI was established to address a concern that demand response resources were not being effectively integrated into restructured electricity markets, which could adversely affect the success of the markets.¹⁸¹ NEDRI's purpose was to develop a comprehensive and coordinated set of demand response programs for the New England regional power markets.¹⁸² The Initiative's stated goal was to outline "workable market rules, public policies, and regulatory criteria to incorporate customer-based demand response resources into New England's electricity markets and power systems."¹⁸³ NEDRI was not intended to replace or displace ISO-NE governance processes but to create a forum promoting best practices and coordinated policy initiatives.¹⁸⁴

NEDRI's structured supported an inclusive and effective stakeholder governance process. NEDRI was a facilitated process backed by technical expert assistance, which in combination were designed to support an expanded stakeholder group that included federal, state, public and private groups that did not normally participate in ISO-NE.¹⁸⁵ Stakeholders represented wholesale and retail market interests, which was a reflection of the nature of and regulation of demand response programs.¹⁸⁶ Technical assistance in the form of Framing Papers, draft recommendations, and guidance documents was provided to educate stakeholders and drive focused discussions on specific topics.¹⁸⁷

The design and order of the stakeholder meetings facilitated effective participation. NEDRI began with a process to establish clear outcomes and goals before any substantive discussions started. At the start of the process, the assembled participants discussed and identified in "general terms the goals of demand response, and general principles that should guide policy and program development."¹⁸⁸ The stakeholders agreed on a set of cross-cutting general principles that could inform that design and implementation of demand-response programs.¹⁸⁹ The general

181. *Dimensions of Demand Response: Capturing Customer Based Resources in New England's Power Systems and Markets*, NEDRI 1 (Jul. 23, 2003), <http://nedri.raabassociates.org/Articles/FinalNEDRIREPORTJuly2003.pdf> [hereinafter NEDRI].

182. *New England Demand Response Initiative*, RAAB ASSOC., LTD. & REGUL. ASSISTANCE PROJECT, <http://nedri.raabassociates.org/> (last visited Oct. 2, 2023).

183. *Id.*

184. *Id.*

185. NEDRI, *supra* note 181, at 2-3, Appendix A (listing the participation of EPA, FERC, Department of Energy, NYISO, PJM, state agencies, consumer advocates, environmental advocates, industry representatives, utilities, and more).

186. *Id.* at 3.

187. *Id.*

188. *Id.* at 4.

189. NEDRI, *supra* note 181, at 4.

principles included focusing the development of market and public policies on enhancing productivity and efficiency, using market forces and competition to integrate demand response resources, and ensuring the demand response programs created no net harm in the immediate future and helped improve air quality over time.¹⁹⁰ The establishment of common, shared principles built the platform upon for making specific recommendations.

Consensus-based decision-making further enabled effective participation from stakeholders. NEDRI's structure stands out for its pairing of consensus-based decision-making with an educational program. By elevating the knowledge of every stakeholder, it made it easier to reach consensus on recommendations. In 2002 and 2003, NEDRI held sixteen plenary sessions, with working group meetings scheduled in between.¹⁹¹ The Initiative created focused discussion of and recommendations on specific demand response policy areas including: regional reliability, load participation in providing contingency reserves, energy efficiency, and retail pricing and metering.¹⁹² For each program area, the assigned group first established basic principles for program design and then work to develop consensus on specific recommendations and program features.¹⁹³ Overall, the initiative produced thirty-eight recommendations, of which thirty-seven were unanimously adopted.¹⁹⁴ The recommendations were made without requirement that they be adopted by ISO-NE, which offered a way to conduct the work without creating any obligations upon participating parties or creating pushback from the RTO.¹⁹⁵

4. Summary

As RTO stakeholder governance processes have taken on more responsibilities and had to manage growing complexity within and between issues, alternative platforms for productive and collaborative discussions may offer a new method for resolving difficult questions. The design and operation of alternative processes can determine whether eNGOs can effectively participate. The combination of education and consensus-based decision-making can knock down barriers to effective participation and produce outcomes that reflective the growing diversity of stakeholders.

III. SECTION III

A. Conclusion

Effective participation is larger than voting rights. Voting rights are critical to protecting minority positions and there is considerable variability in how eNGOs are treated in each RTO. Looking beyond voting rights to understand whether a governance system supports engagement and participation from eN-

190. *Id.* at 5.

191. *Id.* at 3.

192. *Id.*

193. NEDRI, *supra* note 181, at 3.

194. *Id.* at 9.

195. *Id.*

GOs, we find a multitude of important institutional design choices. Are there adequate resources for facilitating participation because effective participation? Is there sufficient transparency via access to documents and key meetings? Do Board selection policies promote functional diversity? Do all stakeholders have input into who sits on the board? Do RTOs facilitate engagement of all stakeholders in high-priority, high consequence governance processes? Addressing these issues will reduce barriers to participation without ever changing how voting rights are assigned.

If electricity is a public good that should be regulated in the public interest, then supporting eNGO participation is a natural conclusion. eNGOs represent an important sector of the population that is not fully represented by state governments or market participants. The increasing complexity of issues coming before RTO stakeholders and boards is stretching the original design of stakeholder governance processes. Formal and informal processes can limit or unlock capacity to accelerate clean energy transition. If RTOs are expected to manage new priorities, they will need full engagement from the stakeholder community. Increased transparency, support to fully participate, a Board attuned to the diversity of stakeholder voices, these are governance changes that can increase effective participation opportunities. The pressure on RTOs is not going to decline. New challenges await RTOs, and our recommendations can help ensure that all stakeholder voices are able to contribute on these important issues on an equitable basis.

APPENDIX I – LIST OF INTERVIEWEES

(Please note that interviewee affiliations may not reflect current position and are taken from time of interview)

1. Rich Cowart, Principal, Regulatory Assistance Project, Board Member, NYISO Environmental Advisory Council
2. Jennie Chen, President, ReGrid
3. Tyson Slocum, Director, Energy Program, Public Citizen
4. Cullen Howe, Senior Advocate, NRDC
5. Chris Casey, Senior Attorney, NRDC
6. Greg Cunningham, Conservation Law Foundation, Director, Clean Energy and Climate Change Program
7. Hannah Payne, Counsel, Fresh Energy
8. John Norris, Former FERC Commissioner, Former Chair of Iowa Utility Commission
9. Michael Colvin, Environmental Defense Fund
10. Josh Walter, Supervising Strategic Advisor – Regional Affairs, Seattle City Light
11. Dorothy Barnett, Executive Director, Climate + Energy Project
12. John Moore, Director, Sustainable FERC Project
13. Katie Southworth, Sustainable FERC Project, Energy & Climate Program Consultant
14. Natalie Karas, Senior Regulatory Attorney, Environmental Defense Fund
15. Ted Kelly, Senior Attorney, Environmental Defense Fund

16. Michael Jewell, Jewell & Associates, Environmental Defense Fund Consultant

17. Laura Ring Doll, past Chair, ERCOT Board of Directors; past Member of CAISO Board of Directors

18. Steve Gaw, former Missouri Public Service Commissioner

19. Natalie McIntire, Technical and Policy Consultant, Clean Grid Alliance

20. Casey Roberts, Senior Attorney, Sierra Club

21. Doug Howe, former commissioner, New Mexico Public Regulation Commission; former chair of Governing Board of Western Energy Imbalance Market

APPENDIX II – INTERVIEW QUESTIONS

Each interview was conducted using a standardized list of questions, which is posted below. Follow-up questions were asked based on answers received.

1. Could you provide us with a brief description of your position.

(i) What kinds of interaction do you have with ISO/RTOs?

(ii) Are you a stakeholder who participates in the governance process or an interested third-party?

2. What is the appropriate role for ISO/RTOs in addressing important environmental issues and challenges?

3. How do environmental NGOs currently participate in the ISO/RTO(s) you are most familiar with?

4. What do you believe is the appropriate role for environmental NGOs in stakeholder governance?

(i) What are some of the current best practices in all RTOs?

(ii) What concerns you about environmental NGO participation in RTO governance?

5. What do you believe is the primary barriers for effective environmental NGO participation?

(i) How are the barriers environmental NGOs face different than other stakeholders?

(ii) Are those barriers substantive or procedural (access to documents, meetings, and RTO staff)?

6. Are there specific RTO/ISO functions where eNGO participation would enhance outcomes?

7. Can you comment on the effectiveness of states, renewable energy generators, alternative resource providers in advancing environmental issues in the stakeholder process?

8. Outside of the stakeholder governance process, how have RTOs tried to address or incorporate environmental interests and concerns?

(i) How successful has this been?

(ii) What concerns do you have with this approach?

9. What have been the major important recent environmental issues or market issues of environmental importance addressed by your RTO/ISO?

(i) How did the stakeholder process function in addressing these issues?

(i) How could it have been improved?

10. Outside of the RTO Stakeholder process what challenges do you see with RTOs addressing important environmental policies and challenges?

11. Do you have any comments on how the stakeholder governance process should be changed to function effectively in its role over governing RTO markets and operations?

12. Do you have any final thoughts for us on environmental NGOs and RTO governance?

THE EVOLUTION OF PARTICIPATORY POLICY- MAKING FOR REGIONAL POWER GRIDS

Nicholas Johnson, Stephanie Lenhart,* and Seth Blumsack**

Synopsis: In the United States, Regional Transmission Organizations (RTOs) are critical for maintaining electric reliability and facilitating the shift toward more efficient and sustainable electric power systems. RTOs are voluntary member-driven organizations that engage hundreds of stakeholders in policy decisions affecting planning, markets, and operations. RTOs have evolved into highly complex and interdependent systems with internal feedback among and within RTO functions, and external feedback from emerging technologies and federal and state clean energy policies. In the PJM Interconnection, the expanded scope of responsibilities, complexity, and member body size has created tensions within the stakeholder processes that has led some to question the efficacy of existing decision-making structures. We develop a case study of recent tensions within the PJM stakeholder process and argue that the source of many of these tensions is a fundamental change in the organizational nature of PJM and other RTOs.

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I. INTRODUCTION

“I’ve said it before and I’ll say it again – democracy simply doesn’t work!”
 --Kent Brockman, *The Simpsons*

RTOs have become an established part of electricity production and delivery in the United States. The seven U.S. RTOs¹ manage approximately 70% of wholesale electricity supply² using combinations of administrative procedures and market mechanisms. As the independent regional transmission system operator and market organizer, the RTO is required by the Federal Energy Regulatory Commission’s (FERC) Order 2000 to have a “decision making process that is independent of control by any market participant or class of participants,”³ and to include stakeholders in system governance.⁴ “RTOs are organizations whose success depends on voluntary participation and engagement by a large number and variety of stakeholders, including transmission owners, generating companies, electric distribution utilities, industrial energy consumers, public consumer advocates and others.”⁵ RTOs have become critical players in facilitating technological change in the electric power grid, including grid integration of renewable resources; including new market actors, such as energy storage and third-party demand response; and negotiating inter-technology competition, such as the increased use of natural gas in place of coal for power generation.⁶ RTOs also need to accommodate state energy policy choices, such as renewable portfolio standards. “Despite the goal of achieving independence from any individual stakeholder or class of stakeholders, RTOs are subject to both political forces and technological innovations, placing them under continuous pressure to evolve.”⁷

To understand the dynamics of the changing context for RTO decision making better, we interviewed stakeholders who participate in the PJM stakeholder engagement process. Our study reveals perceptions among PJM management, staff and stakeholder members and identifies emerging tensions that have made it increasingly difficult to move some issues forward to resolution through PJM’s stakeholder process.⁸ Key factors contributing to these tensions include:

1. Independent regional grid operators in North America go by several different names, including RTOs and Independent System Operators (ISOs). In this essay we use the term RTO in a general sense to encompass all such organizations.

2. *RTOs and ISOs*, FERC, <https://www.ferc.gov/industries-data/electric/power-sales-and-markets/rto-and-iso> (last visited Oct. 12, 2023); *Midcontinent Independent System Operator Adding Four New Electric Territories in December*, EIA (Oct. 24, 2013) <http://www.eia.gov/todayinenergy/detail.cfm?id=13511>.

3. Order No. 719, *Wholesale Competition in Regions with Organized Electric Markets*, 125 FERC ¶ 61,071 at P 503 (2008); see also Kate Konschnik, *RTOGov: Exploring Links Between Market Decision-Making Processes and Outcomes*, NICHOLAS INST. ENV’T. POL’Y SOL., DUKE UNIV. (Sept. 2019) (detailing the governance requirement).

4. Order No. 719, *supra* note 3, at P 503.

5. Nicholas H. Johnson, Dissertation, *Studies in the Governance of Regional Transmission Organizations*, PENN STATE UNIV. 3 (Dec. 2021).

6. *Electric Competition*, FERC, <https://www.ferc.gov/industries-data/electric/power-sales-and-markets/electric-competition> (last accessed Oct 12, 2023).

7. Johnson, *supra* note 5, at 3.

8. See, e.g., Kyungjin Yoo & Seth Blumsack, *Can Capacity Markets be Designed by Democracy?*, J. OF REGUL. ECON., 127, 128 (Mar. 2018), <https://doi.org/10.1007/s11149-018-9354-1> [hereinafter *Can Capacity*

- The *emerging influence of new energy policy objectives* has broadened the original responsibilities of RTOs, changing the fundamental nature of RTOs as organizations. While energy policy originally focused RTOs on reliability and affordability, more recent policy choices at the state and federal level have had the result of putting RTOs in the position to meet additional policy goals for sustainability and technological innovation.
- As RTOs and their practices have matured and as their markets have opened to a broader array of participants, a *narrowing of both stakeholder interests and the scope of RTO decisions* has created tension by asking a diverse group of stakeholders to consider RTO rule changes that increasingly tend to establish apparent winners and losers.
- *Internal reactions* to these tensions by RTO staff reflect serious concern about the ability of RTOs to maintain their core reliability mission, but an increasingly active role by RTO staff in steering the stakeholder process through some issues raises questions among some stakeholders and RTO staff about the efficiency of the process and the spirit of Order 2000.

At the same time, the decision-making process has become more complex. The increasing complexity of the market systems managed by RTOs means that changes to RTO rules increasingly create unanticipated interactions within and across RTO markets and practices, where a change in one set of market rules can affect outcomes in other markets. These interactions lead to specific winners and losers among the RTO stakeholder population, and the losers in a specific situation naturally turn back to the stakeholder decision-making process for adjustments that will ameliorate their losses.

This essay takes a step toward a more systematic understanding of the tensions within RTOs, the processes used to address these tensions, and ultimately to identify needed mechanisms to balance the technical missions of RTOs with the need for increasingly inclusive stakeholder participation. We hope that this research will yield insights for refinement of RTO stakeholder processes as they continue to evolve in response to complex market, regulatory, and technical demands under which critical infrastructure decisions are made.

In the following Section, we first provide an overview of the differences in RTO governance structures and the drivers in their evolution. Section III presents the study methodology and results. We use our interview data to describe specific tensions that have arisen within the PJM stakeholder process. The relevance of these identified sources of tension are discussed in the context of capacity markets in Section IV, and we conclude in Section V.

II. PJM'S ORGANIZATIONAL STRUCTURE

In general, RTO decision processes are complex and involve varying degrees of stakeholder involvement. There are differences in how much authority RTOs vest in stakeholder groups to craft RTO rule/protocol alternatives and decide which rule changes are filed before the FERC.

The PJM Board of Managers is an independent body that receives recommendations from standing committees of stakeholders representing specific industry sectors.⁹ The stakeholder engagement process is structured, with a hierarchy of committees, sector representation, membership requirements, and voting.¹⁰

PJM has about 1,100 members¹¹ categorized in five membership sectors: Transmission Owners (fifty-one, 5%), Generators (340, 34%), Electricity Distributors (fifty-four, 5%), End Use Customers (forty-three, 4%), and Other Suppliers (558, 51%).¹² The Other Suppliers sector is significantly larger than the other sectors and is a highly heterogeneous group including power marketers, financial institutions, and municipal and cooperative utilities.¹³

Stakeholder-driven decision making at PJM usually involves a multi-layered and highly hierarchical structure.¹⁴ For a stakeholder or group to change PJM's rules or protocols they must introduce the change in one of the thematic or issue-specific standing committees, working groups or task forces, and then manage it as it is deliberated in the Markets and Reliably Committee (MRC) and the Members Committee (MC) before moving on to the Board of Managers and, if needed, a formal filing with the FERC.¹⁵ Uniquely among all RTOs, the PJM Members Committee has filing rights to the PJM Operating Agreement under section 205 of the Federal Power Act, so the MC can also go directly to FERC with revisions to the Operating Agreement that would fall under section 205 filings.¹⁶ Appendix A shows how an issue moves through the stakeholder process beginning with an issue's creation, the development of a problem statement and formal charge, and to voting in the committee bodies on issue resolution.

9. *An Introductory Guide for Participation in PJM Processes*, FERC, <https://www.ferc.gov/introductory-guide-participation-pjm-processes> (last accessed Oct. 12, 2023).

10. *Id.*

11. The information in this paragraph was obtained from the PJM membership list on September 15, 2023. *Member List*, PJM, <https://www.pjm.com/about-pjm/member-services/member-list.aspx> (last accessed Oct. 12, 2023).

12. *Id.*

13. *Id.*

14. Figure 2 author adaptation from *PJM Manual 34: PJM Stakeholder Process – Section 5: Structure of the Stakeholder Process*, PJM 25 (Jan. 25, 2023), <https://www.pjm.com/~media/documents/manuals/m34.ashx> [hereinafter *PJM Stakeholder Process*]; see also Johnson, *supra* note 5, at 18.

15. *Id.*

16. *Federal Law Guides Changes in PJM Governance Documents: Review standards under sections 205 and 206 of the Federal Power Act have a direct effect on how proposed revisions to PJM's governing documents are filed with, and reviewed by, the Federal Energy Regulatory Commission*, PJM 1-2 (July 20, 2023), <https://www.pjm.com/~media/about-pjm/newsroom/fact-sheets/federal-power-act-sections-205-and-206.ashx> [hereinafter *Federal Law Guides Changes in PJM Governance Documents*].



Figure 2: The PJM Stakeholder Process.¹⁷

Voting in the MRC and MC are highly structured and segmented by defined sectoral affiliations.¹⁸ Voting in the subcommittees and working groups is done by a majority vote, and it is possible (and common) for multiple proposals to pass through to the MRC.¹⁹ Voting in the MRC and the MC is done through sector-weighted voting with a two-thirds supermajority required for an issues to pass and go to the Board for final approval to file with FERC.²⁰

The MC takes on particular importance since this Committee has the authority to over-ride decisions of the Board in some circumstances.²¹ “It is also possible under certain circumstances for proposals to fail the MRC vote but still go to the MC for a vote if consensus building amongst stakeholders can be done to gain support for a modified proposal.”²² “PJM’s Independent Market Monitor may make proposals to the MC that did not pass through the stakeholder process.”²³

17. *PJM Stakeholder Process*, *supra* note 14, at 25; *see also* Johnson, *supra* note 5, at 18.

18. *Id.*

19. *PJM Stakeholder Process*, *supra* note 14, at 17.

20. *Can Capacity Markets be Designed by Democracy?*, *supra* note 8, at 131.

21. *Federal Law Guides Changes in PJM Governance Documents*, *supra* note 16, at 1-2 (outlining section 205 and 206 filings. Sections 205 and 206 of the Federal Power Act give FERC much of their authority over the transmitting and selling of interstate power by the electric power industry and are relevant to utility and RTO documents that are filed with and reviewed by FERC. Documents that are filed to FERC through section 205 need to show that the submitted changes are “just and reasonable.” Documents that are filed through section 206 must also prove that the current document is “unjust and unreasonable” which may be considerably more difficult to do and thus having section 205 filing rights is a powerful tool. In a disagreement between the MC and the PJM Board over the Operating Agreement, the PJM Board would have to utilize section 206 filing rights to try and override the MC. There are two other foundational documents in PJM. The PJM Board has section 205 filing authority over the Reliability Assurance Agreement. Section 205 filing authority over most of the Open Access Transmission Tariff is split between PJM Board and the PJM transmission owners.)

22. Johnson, *supra* note 5, at 10.

23. *Id.*

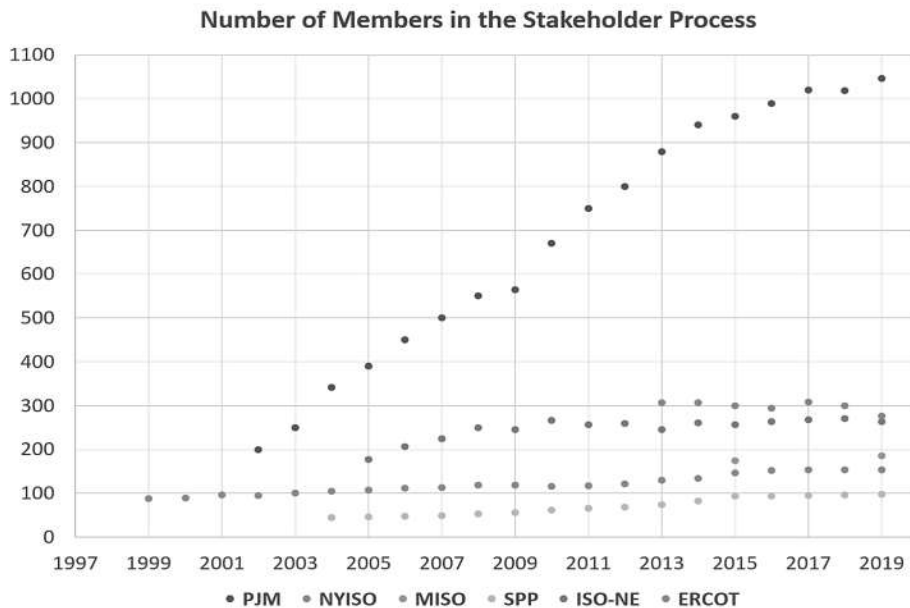


Figure 3.²⁴ “The Growth in RTO Membership. PJM membership data includes full, associate, and ex officio members. NYISO membership data represents both voting and non-voting organizations that belong to the Management Committee. ISO-NE membership data represents members of the Participant’s Committee that have voting rights. ERCOT membership data includes both corporate and (non-voting rights) associate members. All SPP members have voting rights. Limited historical data for MISO is available.”²⁵

III. THE CHANGING STAKEHOLDER ENVIRONMENT IN PJM

Some RTOs have shown substantial growth in membership, as shown in Figure 3.²⁶ PJM’s membership is notable for its growth, which has roughly quintupled since the late 1990s, but other RTOs have grown as well.²⁷ “SPP and MISO have more than doubled the number of members in their respective decision-making bodies.”²⁸ “ISO-NE and NYISO have also shown growth.”²⁹ The intensity of participation in the stakeholder process of members varies, with some choosing not to participate. Some members have multiple participants. The number of *market participants* (who do not participate in the stakeholder process) in each RTO far outnumber the number of members of each RTO.

The rapid growth in PJM stakeholder membership, along with its position as the largest RTO and a leader in electricity market design, motivates our focus on

24. *Id.* at 8.

25. Johnson, *supra* note 5, at 8.

26. *Id.* at 7. CAISO is not represented because their organizational structure does not contain a decision-making body comprised of member organizations.

27. *Id.*

28. *Id.*

29. Johnson, *supra* note 5, at 7.

how the character of PJM's stakeholder process has evolved and the forces driving that evolution. This case study discusses how both the context for decision making in PJM have evolved, and what tensions have arisen as a result. We conclude that this changing context consists of three interrelated factors. First, there has been a rapidly evolving policy context influencing decisions made about planning and operating the power grid. Second, there has also been an explosion in the number of organizations participating, or at least voting, in the decision-making process, with many of the new participants having narrow financial interests. Third, as RTOs and their markets have matured as institutions there has been a progressive narrowing of the kinds of issues that stakeholders are asked to consider; in particular these increasingly narrow issues tend to produce starkly different economic winners and losers.

Our case study consists of two parts.³⁰ The first is analysis of semi-structured interviews with PJM staff and stakeholders conducted in 2013 and 2014. This coincides with a period of growing tension within the PJM stakeholder process and includes the first (and, as of this writing, only) time that a backstop process known as the Enhanced Liaison Committee was triggered to resolve an issue that stakeholders could not.³¹ The second part discusses PJM's approach to managing more recent stakeholder tensions, particularly around capacity market issues.

A. Interview Protocol

We conducted twenty-one semi-structured interviews with PJM stakeholders, staff, board members and others with deep knowledge about PJM's stakeholder process in 2013 and 2014. We asked about transmission planning and the integration of renewable energy, as well as about perceptions and interpretations of their own and other stakeholder interests for participating, and the formal and informal nature of communication within the stakeholder process. This initial information allowed us to fine tune our interview protocol³² and later respondents were directly asked about the stakeholder process if they had not mentioned the topic previously.

Participants were chosen through purposeful sampling.³³ We identified initial participants by using recommendations from our research advisory committee. Next, PJM documents of committee meetings were used to identify individuals who were active and experienced in the organization. Here we targeted participants categorically, to get representation amongst all five-member categories, PJM staff, and other stakeholders who weren't necessarily members. At the end of each interview, we also asked participants if they felt that there was anyone in particular with whom we should talk.

30. *Id.* at 10 (including more detailed information on the construction of the case study method).

31. *PJM Stakeholder Process*, *supra* note 14, at 85-86; *see also Enhanced Liaison Committee – Capacity Performance*, PJM, <https://www.pjm.com/committees-and-groups/closed-groups/elc> (last visited Oct. 19, 2023) (detailing more information on the PJM Enhanced Liaison Committee which has been archived).

32. MATTHEW B. MILES & A. MICHAEL HUBERMAN, *AN EXPANDED SOURCEBOOK – QUALITATIVE DATA ANALYSIS* (SAGE Publications, Rebecca Holland ed., 2nd ed. 1994).

33. THOMAS R. LINDLOF & BRYAN C. TAYLOR, *QUALITATIVE COMMUNICATION RESEARCH METHODS* 120-23 (SAGE Publications, 3rd ed. 2011).

Quotes used in this paper are representative of ideas shared by multiple respondents and shown as (PJM-XX). The raw interview data is on file with the authors, consistent with policies established through the Institutional Review Board at Pennsylvania State University.

B. Outcomes

Respondents identified challenges with the stakeholder process that we categorized into three factors: (1) The increasingly complex *policy influence* on the decisions that the stakeholder process is asked to make; (2) the narrowing *scope* of decisions and narrowing *interests* of individual stakeholders; and (3) the *internal response* by PJM to tension in the stakeholder process. We now turn to a discussion of each of these three factors.

1. The Emerging Influence of New Policy Objectives

In the initial years of the PJM RTO, the organizational mission of maintaining electric reliability was highly aligned with the missions of the electric utilities whose transmission responsibilities PJM was assuming.³⁴ This mission was also familiar to the primary stakeholders participating in developing rules for PJM, and those stakeholders were fewer in number.³⁵ The interviewees who were involved with the earliest days of PJM RTO expressed some sense of lost comradery that made things seem simpler (even if the issues themselves were complex).

Proposed policy and rule changes within the RTO had costs and benefits, and created winners and losers, but our interview participants described an environment in which decisions were ultimately made in light of the critical reliability mission, as described by one participant:

The nature of the problems in the beginning were isolated. You could work on one area and make a fix and be oblivious to the surrounding areas. As things got more interconnected and interdependent that wasn't working. The nature of the problem-solving got more difficult. (PJM-02)

Some of our interview participants pointed towards a shifting set of responsibilities within the RTO, driven primarily by changes in the policy environment. RTOs have increasingly been viewed not only as the keepers of a reliable power grid, but also as market-makers and promoters of economic efficiency (following the issuance of Order 2000);³⁶ a mechanism to absorb renewable power generation investments to comply with state Renewable Portfolio Standards and federal climate regulation; and the means to accommodate new technologies wanting to participate in electricity markets such as demand response and energy storage.

The expansion of RTO responsibilities appears to have had two related impacts on the functioning of the stakeholder process. First, it expanded the size and diversity of PJM's voting membership, as highlighted in Figure 2. Second, it created complex interactions between rule changes that did not exist before. This additional complexity has induced reinforcing feedbacks with a change in one set

34. *Can Capacity Markets be Designed by Democracy?*, *supra* note 8, at 128.

35. *Id.*

36. Order No. 2000, *Regional Transmission Organizations*, 89 FERC ¶ 61,285 (1999).

of rules inducing a need for more rules and additional complexity. As put by two stakeholders:

It's the complexity of the rules that I think is really throwing a lot of people off . . . If you got one rule that's designed on how FTRs are funded, there's five or six other things that could affect that FTR under funding. Peeling that onion back has been very difficult. It was simple when we started. . . . Now, as the years have gone by and we keep on having this plethora of rule changes—because 'oh, we didn't think of that' or 'oh, that's not working. (PJM-03)

Most of the conflicts, within our industry, have, if you think about it, they don't come from the operation of the system. They come from the fact that we have broader public policy goals, that aren't enshrined at the federal level . . . a lot of them are state initiatives, because we have no agreement on what our energy policy should be. (PJM-04)

2. The Narrowing of Issues and Interests

As PJM's markets have evolved, it has faced a narrowing of issues that the stakeholder process is asked to address. At the same time, the scope of its markets has grown to encompass a large number of new stakeholders beyond the integrated utilities whose service territories make up the physical footprint of PJM. Many of these new stakeholders have narrowly defined business interests in specific markets or products within the PJM footprint, differing from the interests of the vertically-integrated utilities that comprised PJM's initial membership.

As (PJM-06) said:

We probably have [fewer] of the big policy decisions. In the beginning I think there was more policy direction, big ticket decisions of how the industry wanted to move particularly under open access deregulation. The members had a better understanding of getting their arms around that. Maybe because most of them didn't necessarily know how ultimately financially that would impact them. As we matured and the details are getting much more specific . . . it's less about what necessarily is what's good for the industry. It's much more now just coming out with this either impacts my business or doesn't.

The result was described by our interview participants as “pocketbooking” - voting in response to clearly delineated financial positions. Pocketbooking is a natural response towards the increasingly narrow and technical issues put before stakeholders under PJM processes. Several of our respondents reported that this development has made compromise and informal collaboration more difficult, with one stakeholder explaining:

In PJM in particular, much of the infighting about rule changes is on narrow and detailed parts of the rules that naturally, as you winnow down a problem, you have less degrees of freedom to move and less room for compromise . . . I don't want to diminish the potential for cost impact . . . the stakes are high—but it just leaves stakeholders with less room to move. (PJM-07)

In other words, stakeholders have become more focused on economic impacts of specific decisions and less focused on the broader reliability mandate that was a cornerstone for vertically integrated utilities. In response, the PJM staff has had to participate in a more active manner to fill the void due to their mandate to maintain reliability.

3. Internal Reactions to Maintaining the Core Reliability Mission

PJM stakeholders described ways in which PJM, through actions by its staff and other initiatives related to policy formation within the RTO, has begun to play a more active role in the stakeholder process. One stakeholder (PJM-08) described how “the perception, always, is that PJM is doing more and more stuff on its own or, let me say, being less flexible in some of the solutions that it’s looking for.”

Perhaps explaining this perceived shift, we also found a shared perception among PJM staff that the increased difficulty of stakeholder coordination may threaten reliability of the electricity system – viewed within PJM as the primary mission of the RTO.

While PJM and other RTOs have many different responsibilities, electric reliability tends to be internally prioritized. As one customer-side stakeholder put it,

I think they have to because they have certain absolute responsibilities, and I think that there are some things that are entirely within PJM’s purview. It’s their responsibility. The reliability stuff is theirs, and they can’t not perform that function because stakeholders can’t agree on how to move forward. (PJM-08)

This view was echoed by a state regulator: “Reliability really is the fundamental reason that the [PJM] board will [go over stakeholder heads]—if they can’t get a stakeholder consensus, will go forward [to the FERC] with something” (PJM-04). If policy changes relevant to electric reliability are contentious, then a tension is created between this critical mission of the RTO (and the focus of the PJM staff) to keep the grid functioning and the desire to drive stakeholder groups to consensus.

Discussions of this tension among our interview participants revealed some willingness to defer to the expertise of PJM’s staff, its market monitor and ultimately to the FERC. This deference appears to cut across sectoral or other interest lines among the PJM stakeholders. Ultimately, the increasingly active role taken by PJM, according to the perceptions of our interview participants, may not simply be necessary but also welcome. Some stakeholder comments reflected the view that PJM management or the board will recognize sub-optimal actions taken by the stakeholder process and will take steps to correct those sub-optimal actions. One board member explained that members rely on PJM management and the Board to balance conflicting interests and that members have stated:

We have to vote this way because we represent our members and this is their interest, but in the end, we know that the PJM management and the board will do the right thing, even if we vote for what they know in their hearts is the wrong thing. (PJM-09)

Some control has been ceded to PJM’s independent market monitor, who has in some cases been viewed as a safety valve. Some issues take a great deal of time to understand the long-term ramifications of. One respondent told us,

... just below the surface [of some stakeholder issues] is a very significant conflict. Sometimes it’s only all supposing things because people don’t have the time or the energy to deal with all of it. People just let things go . . . [and] voted in favor of things which are clearly against their own interest . . . and said, “We know [the market monitor will] take care of it if anything comes up.” (PJM-10)

IV. EVOLUTION OF CAPACITY MARKET

Tensions within PJM's stakeholder process have arisen over multiple issues, but perhaps none more so than over PJM's capacity market. The capacity market is a mechanism used to ensure that the RTO will have enough power generation capacity to meet future peak electricity demand, plus some extra capacity for reserve. This construct is important for PJM because it is one of the chief mechanisms that PJM uses to ensure adequate future electricity supply. It has also been a highly contentious issue for over a decade.

Multiple policy drivers external to PJM affect the PJM capacity market. These are largely state-led and mostly related to environmental policy. When PJM's electricity markets first opened in 1997, none of the states in its footprint had Renewable Portfolio Standards, meant to encourage growth in renewable and low-carbon power generation. Today all PJM states (and DC) have some variation of an RPS, except for Kentucky and West Virginia.³⁷ In 2011, two states attempted to subsidized new generation specifically to affect capacity market prices, according to the market monitor.³⁸ More recently, states have begun subsidizing existing nuclear plants.³⁹ Outside of capacity market affects, PJM is now needing to determine how the mix of exogenous carbon pricing markets (at state, regional, and RTO levels) will affect PJM, and in 2019 created a new senior task force to address the questions.⁴⁰

Second, the narrowing of issues and interests has been particularly clear within the capacity market. Because the capacity market is set up to allow RTOs to meet regulatory requirements with respect to resource adequacy, price outcomes in capacity markets can be driven by the administrative rules determined through the stakeholder process. Generators naturally benefit from rules that support higher capacity prices, and customer-side interests benefit from lower prices. Stakeholder behavior in capacity market deliberations has reflected this. The narrowing of interests can also be seen in the results of MC votes since 2014, where there is strong evidence of bloc voting.⁴¹

Third, PJM's response to these conflicting interests has been to take a more active role in market development by making unilateral decisions, relying on alternative processes or looking to FERC for solutions. Because capacity markets have been controversial and the financial stakes have been high, the PJM stake-

37. A map showing the status of state RPS policies. *Renewable & Clean Energy Standards*, DSIRE (Nov. 2022) <https://ncsolarcen-prod.s3.amazonaws.com/wp-content/uploads/2022/11/RPS-CES-Nov2022.pdf>.

38. Joe Bowring, *Capacity Markets in PJM*, 2 *ECON. OF ENERGY AND ENVTL. POL'Y* 47, 63 (Sept. 2013) <https://www.jstor.org/stable/26189456>.

39. Such subsidies in Illinois were upheld by the 7th Circuit Court of Appeals. *Elec. Power Supply Ass'n v. Star*, 904 F.3d 518, 518 (7th Cir. 2018).

40. *Carbon Pricing Senior Task Force (CPSTF) Final Report*, PJM (Nov. 2021) <https://www.pjm.com/-/media/committees-groups/committees/mc/2021/20211115-webinar/20211115-item-07o-cpstf-report.ashx>; The PJM Carbon Pricing Senior Task Force was closed in 2021, but information is archived. See *Carbon Pricing Senior Task Force*, PJM, <https://www.pjm.com/committees-and-groups/closed-groups/cpstf> (last visited Oct. 19, 2023).

41. *Can Capacity Markets be Designed by Democracy?*, *supra* note 8, at 134; *The Political Complexity of Regional Electricity Policy Formation*, *supra* note 8, at 15.

holder process has exhibited repeated difficulties in supporting decisions on capacity market rules. The stakeholder process has not been able to move forward a set of administrative rules for the capacity market since 2011. On three separate occasions (2011, 2014 and 2018) stakeholders rejected every set of capacity market rules put before them, with supply-side interests voting down proposals that would tend to depress prices and customer-side interests voting down proposals that would tend to increase prices. In each of these cases, PJM responded to the stalemate in the stakeholder process. In 2011, after stakeholders voted down every set of capacity market rule changes (including a proposal to make no changes to the rules at all), the PJM Board selected the set of rules most preferred by PJM staff. In 2014, the PJM Board triggered an alternative mechanism for stakeholder engagement rather than take unilateral action. This alternative stakeholder mechanism, known as the Enhanced Liaison Committee (ELC), involves stakeholders forming organic coalitions that present proposals directly to the Board.⁴² The Board ultimately makes the decision (and in this case files the changes with FERC).⁴³ In 2018, PJM asked FERC to convene a settlement process rather than prolong fundamental disagreements among stakeholders.

The capacity market serves as a useful example of how a changing policy environment and evolving focus of stakeholder interests have combined to introduce tensions in PJM's stakeholder process, affecting its ability to advance issue. The internal responses of the PJM Board to these tensions illustrate a more fundamental regulatory tension in the design of RTOs themselves. FERC has charged RTOs with a fundamental mission to maintain a reliable power grid and ensuring resource adequacy is a core aspect of that mission.⁴⁴ FERC has also sought to ensure a prominent role for stakeholder-driven decision making within RTOs. In PJM, that has resulted in a particularly high level of formal authority within the stakeholder group.⁴⁵ When these design goals for RTOs have clashed, as they have repeatedly involved PJM's capacity market, the organizational response by PJM has been to support the reliability mission in ways that reveal the organization's preferences.⁴⁶ These responses – which constitute backstop mechanisms for organizational decision-making – represent a valid part of RTO stakeholder responses whose structure and function have received relatively little attention in the emerging RTO governance literature.⁴⁷

42. Christina Simeone, *PJM governance: Can Reforms Improve Outcomes?*, KLEINMAN CTR. FOR ENERGY POLICY 32 (May 2017), <https://kleinmanenergy.upenn.edu/wp-content/uploads/2020/08/PJM-Governance-Reforms-1.pdf>.

43. *Id.* at 33.

44. Michael H. Dworkin & Rachel Aslin Goldwasser, *Ensuring Consideration of the Public Interest in the Governance and Accountability in Regional Transmission Organizations*, 28 ENERGY L.J. 543, n.46 (2007), https://www.eba-net.org/wp-content/uploads/2023/02/10-Governance_of_RTOs.pdf.

45. Simeone, *supra* note 42; Stephanie Lenhart & Dalten Fox, *Participatory democracy in dynamic contexts: A review of regional transmission organization governance in the United States*, 83 ENERGY RSCH. & SOC. SCI. (Jan. 2022), <https://doi.org/10.1016/j.erss.2021.102345>.

46. *Can Capacity Markets be Designed by Democracy?*, *supra* note 8; *The Political Complexity of Regional Electricity Policy Formation*, *supra* note 8.

47. This literature is growing, but highly relevant examples include: Dworkin, *supra* note 44; EMERY ROE & PAUL R. SCHULMAN, *High Reliability Management: Operating on the Edge* (Stanford Univ. Press 2008); Jonathan Raab & Patrick Field, *An Assessment of PJM's Governance and Stakeholder Process*, RAAB ASSOC. &

The nature of backstop solutions to stakeholder stasis has continued to evolve in ways that increase the authority of PJM within its own stakeholder process. One outcome of ongoing tensions over capacity market design was the 2019 development of a stakeholder processes called The Critical Issues Fast Path (CIFP).⁴⁸ Like the ELC, the CIFP is intended to be used only rarely and for particularly important and contentious issues. This companion to the ELC acts as a hybrid model of decision-making by giving PJM more control over the timeline and solution proposal than it would otherwise have, but still allowing members to vote on PJM's solution and any proposed alternative solutions.

V. CONCLUSION

RTOs are highly complex organizations that will continue to be critical focal points for electricity policy implementation in North America. These complex organizations have been evolving in ways that reflect the complexity of industry feedbacks induced by policy change. State and federal policies have opened the doors to new types of participants in RTO markets, and in an effort to accommodate these new participants (whose business models tend to be highly focused) RTOs have allowed their missions to broaden. These broader missions have, in turn, induced fundamental organizational change that has been reflected in tensions arising within stakeholder-driven decision processes.

PJM's increased role in the stakeholder process represents a series of evolutionary steps in response to the changing industry and regulatory environment. This evolution is important in that it highlights tensions between differing views of PJM as an organization. It also encapsulates one of the major challenges in increasing the level of participatory decision-making in all areas of the U.S. power grid. On the one hand, the internal culture of PJM views PJM as operating with a clearly-defined reliability mission and deference towards expertise consistent with that mission. On the other hand, PJM's more diverse stakeholders view PJM as a forum to further and negotiate their own narrow interests.

The broadening stakeholder positions, the increased diversity of stakeholder interests, and the evolution of demands on PJM, have made reaching decisions on some issues within PJM much more difficult. To the extent that FERC, PJM and other RTOs may build new mechanisms for more inclusive stakeholder decision-making, these tensions are likely to persist and even grow. We suggest that the development of appropriate backstop mechanisms and clear delineation of high-priority organizational goals will need to be integrated into reforms around RTO governance and stakeholder participation and not assembled *ex post* once existing

CONSENSUS BLDG. INST. (Oct. 1, 2009), <http://www.raabassociates.org/Articles/PJM%20GAST%20Final%20Phase%201%20Report.pdf>; Stephanie Lenhart, et al., *Electricity governance and the Western energy imbalance market in the United States: The necessity of interorganizational collaboration*, 19 ENERGY RSCH. SOC. SCI., 94–107 (2016), <https://doi.org/10.1016/j.erss.2016.05.015>; Mark James, et al., *How the RTO stakeholder process affects market efficiency*, R STREET (Oct. 5, 2017), <https://www.rstreet.org/wp-content/uploads/2018/04/112-1.pdf>; Christina E. Simeone, *Reforming FERC's RTO/ISO stakeholder governance principles*, 34 THE ELECTRICITY J. (June 2021), <https://doi.org/10.1016/j.tej.2021.106954>.

48. *PJM Stakeholder Process*, *supra* note 14, at 61.

processes have stopped functioning. Despite these challenges, we perceived a belief in the system among some participants that have been active for many years. One stakeholder commented,

It's not [any longer] the Wild West, where we just have to throw up a market design, and hope that it works, and then tweak it over the years, as we've done. I think things used to be easier to get through, meaning we didn't have to go through all this process, and if we had the votes, we could just trample on everybody. There [now] may be some frustration with that because that isn't any longer the case. There's a fairly onerous process in place, and sometimes it is too onerous for its own good. Other times it gives us all time to stop, and think, and usually, I think, work out a better solution. (PJM-08)

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REPLACING THE UTILITY TRANSMISSION SYNDICATE’S CONTROL

*Ari Peskoe**

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

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

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

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I. INTRODUCTION: POWER SECTOR GOVERNANCE HAS STAGNATED

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

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

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

power sector rules determine who can generate and transmit electricity and influence the mix of resources powering the region.

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

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

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

To protect against this risk, the Federal Energy Regulatory Commission (FERC) requires RTOs to employ "a decision making process that is *independent*

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

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

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

of control by any market participant or class of participants.”⁵ This “independence principle,” however, has not prevented RTO governance from favoring incumbent firms, technologies, and business models.⁶ As leading scholars on this topic have observed, RTO governance is “designed around legacy technologies” and has an “endemic bias against new resources that threaten incumbent profits.”⁷ Compounding the RTO’s bias against new entrants and new technologies, transmission-owning IOUs can make regional decisions that supersede RTO actions. With this unilateral authority, IOUs have imposed rules that insulate their investments from competition, wall-off transmission development from outside firms, raise costs for new entrants, and prevent other firms from wielding the IOUs’ formal power in regional decisionmaking processes.⁸



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

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

5. 18 C.F.R. § 35.34(j)(1)(ii) (2000) (emphasis added).

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

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

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

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

10. See, e.g., Order No. 719, *Wholesale Competition in Regions with Organized Electric Markets*, 125 FERC ¶ 61,071 at P 16 (2008) (“[E]liminat[ing] barriers to the participation of demand response . . . by ensuring

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

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

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

FERC regulation of utility alliances dates back half a century when the Commission began applying utility law's prohibition against undue discrimination to regional IOU agreements. From 1996 to 2002, FERC promoted and even proposed to mandate independent governance led by an RTO or other entity that has no financial stake in market participants. FERC believed that independent control of transmission operations and planning was essential for opening the closed IOU-

comparable treatment of resources.”); Order No. 1000, *Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities*, 136 FERC ¶ 61,051 (2011) (ordering RTOs to delete tariff provisions that grant incumbent utilities the right to build any RTO-planned project within their state-granted service territory and requiring that regionally cost allocated projects be developed through competitive processes open to non-incumbent developers); Order No. 841, *Electric Storage Participation in Markets Operated by Regional Transmission Organizations and Independent System Operators*, 162 FERC ¶ 61,127 at P 1 (2018) (finding that RTO market rules present “barriers . . . to the participation of electric storage resources” and ordering RTOs to adopt new rules); Order No. 2222, *Participation of Distributed Energy Resource Aggregations in Markets Operated by Regional Transmission Organizations and Independent System Operators*, 172 FERC ¶ 61,247 at P 1 (2020) (finding that RTO market rules present “barriers . . . to the participation of distributed energy resource aggregations” and ordering RTOs to adopt new rules); Order No. 881, *Managing Transmission Line Ratings*, 177 FERC ¶ 61,179 at P 20 (2021) (finding that “the potential inability of RTOs/ISOs to automatically accept and use [Dynamic Line Ratings] provided by transmission owners may prevent RTO/ISO markets from benefiting from the more accurate representation of current RTO/ISO system conditions” and ordering RTOs to update their systems).

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

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

run power systems to new entrants and allowing prices to be set through competitive markets. But by 2005, FERC abandoned its proposed mandate, and it has never meaningfully reformed independent governance. I examine this history to explain why FERC hastily discarded its governance agenda and show how its demise provides FERC with a pathway for governance reforms.

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

Second, regional governance, as compared to local control by individual IOUs, is consistent with the industry's economics and engineering.¹⁷ Coordinated

13. See, e.g., Notice of Proposed Rulemaking, *Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities, Recovery of Stranded Costs by Public Utilities*, FERC Stats. & Regs. ¶ 17,665, 60 Fed. Reg. 17,662, 17,665 (Apr. 7, 1995) [hereinafter Order No. 888 NOPR]; Utilities owning or controlling transmission facilities possess substantial market power; that, as profit maximizing firms, they have and will continue to exercise that market power [] to maintain and increase market share, and will thus deny their wholesale customers access to competitively priced electric generation; and that these unduly discriminatory practices will deny consumers the substantial benefits of lower electricity prices.

14. *Infra* part IV.B.

15. See, e.g., Order No. 2000, *Regional Transmission Organizations*, 89 FERC ¶ 61,285 at pg. 38 (1999) [hereinafter Order No. 2000] (critiquing its Open-Access Rules because they “attempt [to] control behavior that is motivated by economic self-interest through the use of standards of conduct [which] will require constant and extensive policing and requires the Commission to regulate detailed aspects of internal company policy and communication”); Order No. 890, *Preventing Undue Discrimination and Preference in Transmission Service*, 118 FERC ¶ 61,119 at P 26 (2007) (concluding that where its rules “left the transmission provider with significant discretion,” IOUs retain “both the incentive and the ability to discriminate against third parties”); *id.* at P 68 (explaining that “discretion is a significant problem” for IOU determinations of available transmission capacity for third parties because the relevant calculations “vary greatly depending on the criteria and assumptions used [which] may allow the transmission provider to discriminate in subtle ways against its competitors.”).

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

17. See, e.g., Order No. 2000, *supra* note 15, at pg. 16 (“Virtually all commenters support the NOPR’s premise that engineering and economic inefficiencies exist in the operation, planning and expansion of the regional transmission grid and that these inefficiencies hinder electric system reliability and a fully competitive bulk power market.”); 1964 NATIONAL POWER SURVEY, *supra* note 3, at 1 (providing “an outline for the coordinated growth of the industry” in order to unlock the “enormous potential benefits of a truly integrated system of power supply”); U.S. DEP’T OF ENERGY, *National Transmission Grid Study*, at 8 (2002), <https://perma.cc/F6YN-SLV2> (“Robust and reliable regional electricity transmission systems are the key to sustaining fair and efficient competition in wholesale markets that lowers costs to consumers. . . . The transmission systems of tomorrow must be built by relying on open regional planning processes. . . .”).

operations and planning over a larger geographic area takes advantage of resource diversity, varying consumption patterns, and different weather.¹⁸ Regionalization reduces the amount of needed generation capacity, enables more efficient power plant dispatch and system operations, and lessens the potential for market manipulation.¹⁹ Uniform rules across the region administered by a single entity reduce transaction costs and increase trading.²⁰ Regional entities are also better positioned to coordinate across regions than individual utilities. The benefits of regionalization are well understood and widely accepted.²¹

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

Fourth, allowing monopolists to set the pace of technological change is not a recipe for innovation.²⁴ In general, without competitive pressures, monopolists have little reason to innovate because they are shielded from new entrants with

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

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

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

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

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

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

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

different business models or technologies. The utility business model of government-set, cost-of-service rates provides weak incentives for innovation.²⁵ With a conservative industry culture and lack of financial incentives,²⁶ IOUs have little reason to deploy technologies or employ operational and planning practices that improve transmission efficiency or enhance energy trading, despite potential consumer benefits. Their incentives favor stagnation over innovation.²⁷ That's not to say that IOUs never innovate,²⁸ but rather that they judge innovation by its effects on their century-old business model and regional dominance.²⁹

25. Ken Costello, *A Primer on R&D in the Electric Utility Sector*, NAT'L. REGUL. RSCH. INST., 23–26 (May 2016), <https://perma.cc/B2EQ-DXP8>; Elisabeth Gaffy & Steven Kihm, *Does Disruptive Competition Mean a Death Spiral for Electric Utilities?*, 35 ENERGY L.J. 1, 10 (2014) (stating that cost-of-service rates “encourage primarily backward-looking, defensive positioning to protect past infrastructure investment”); Joshua C. Macey & Jackson Salovaara, *Rate Regulation Redux*, 168 U. PA. L. REV. 1181, 1198–99 (2020) (explaining how rate regulation dampens innovation); Jessica Lau & Benjamin F. Hobbs, *Electricity Transmission System Research and Development: Economic Analysis and Planning Tools*, U.S. DEP'T. OF ENERGY, at 15 (Apr. 2021), <https://perma.cc/E2FX-GLTA> (“[R]egulated monopoly utilities have difficulty responding to technology innovation and consumer desires [and] much of utilities’ inability to respond is a result of rate-of-return regulation and the associated business models that utilities have”); Carlos Anchondo et al., *EPA says carbon capture is within reach. Utilities aren’t biting*, E&E NEWS (Jul. 11, 2023), <https://perma.cc/SZQ5-R4VB> (quoting a top executive of the IOUs’ trade association saying “This is an industry that is not generally incentivized to work with emerging technologies. Our regulatory structure does not love the risk involved in new technology.”).

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

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

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

29. For instance, PacifiCorp, which owns utilities whose service territories span parts of six Western states, has implemented dynamic line rating at a facility in Wyoming. The line connects PacifiCorp-owned wind generators and a PacifiCorp-owned coal plant. Memorandum from Pacific Power to Public Utility Commission of Oregon, PacifiCorp Compliance Filing, New Wind and Transmission Project Quarterly Update, Oregon PUC Docket No. LC 67 (Sep. 1, 2020), <https://edocs.puc.state.or.us/efdocs/HAD/lc67had145020.pdf>. A control scheme integrates the wind and coal generation. Under various conditions, coal or wind generation may need to

Handing control back to IOUs is not the answer. The lingering question from my investigation into regional governance is whether RTOs have the potential to be a counterweight to entrenched power. If RTO operations and planning are destined to be constrained by monopolists, should Congress dismantle RTOs in favor of more radical reforms? For instance, some progressives favor a “public option” where government directly controls investment and operational decisions.³⁰ At the other end of the spectrum, it’s possible to imagine a franchise model that awards RTO functions and transmission development opportunities to a non-incumbent firm through a competitive process.³¹ Either approach would attempt to disentangle regional operations and planning from entrenched interests and would likely require Congressional action to implement.

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

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

be shed in order to maintain stability. Rikin Shah, et al., *Upgrading PacifiCorp’s Jim Bridger RAS to Include Wind Generation*, Presented at the 48th Annual Western Protective Relay Conference (Oct. 19–21, 2021), <https://perma.cc/YC6C-RM6J>.

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

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

II. POWER SECTOR INNOVATION HINGES ON GOVERNANCE REFORMS

The world's largest machine is getting an upgrade.³² Our electric power systems are in the midst of a “significant transformation” characterized by wide deployment of fast-acting devices that inject energy and support system stability.³³ To harness the capabilities of these resources and adapt to their limitations, system operators must overhaul transmission operations and planning.³⁴

Transmission operations and planning were once handled almost exclusively by transmission-owning utilities with state-granted monopolies over local delivery. Their primary task was balancing the energy generation of steam-powered turbines with ever-changing consumer demand.³⁵ Maintaining this equilibrium across a transmission network keeps the system running smoothly. Utility management also planned transmission expansion to connect new power plants that

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

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

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

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

would allow the utility to meet growing consumer demand.³⁶ Although operational and planning methods are now more sophisticated, they are rooted in outdated assumptions and fail to harness 21st century grid technologies.³⁷

System operators now have a larger set of tools for supporting system stability, including employing small-scale resources connected to local distribution systems,³⁸ extending across regions to import energy from neighboring networks,³⁹ and optimizing network topology with advanced software and remotely controlled switches.⁴⁰ These and other tools will provide system operators with flexibility and optionality as they seek the most cost-effective means to maintain reliability amid rapidly shifting conditions.⁴¹ Advanced technologies and practices can add

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

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

38. Carmine Rodio et al., *Optimal Dispatch of Distributed Resources in a TSO-DSO Coordination Framework*, IEEE 2020 AEIT INTERNATIONAL ANNUAL CONFERENCE (Sep. 2020), <https://perma.cc/2LPZ-TU5X> (“Distributed generators, interruptible loads and storage systems, which are usually considered as DERs, can be employed as flexibility resources for power system operation, and therefore be exploited to solve grid congestions, provide voltage regulation and power quality services. Currently, such services are traditionally managed by TSOs through the control of traditional power plants, whereas distribution networks play a limited passive role in power system management, since both energy consumption and generation of DERs at distribution level are not yet optimized, nor coordinated with the overall system.”); Sun et al., *supra* note 34 (“Controllable loads and storage . . . can be called upon to help balance supply and demand at the system scale. . . .”).

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

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

41. U.S. DEP’T OF ENERGY, *Advanced Transmission Technologies*, at i–ii (Dec. 2020), <https://perma.cc/JN9U-26P5> [hereinafter *Advanced Transmission Technologies*] (“Advanced transmission technologies, coupled with advanced computational and advanced dynamic situational awareness, are a suite of tools that can help address transmission challenges, improving the efficiency and effectiveness of electricity delivery and increasing the reliability and resilience of the system. . . . Enhanced planning and optimization methods can help minimize operating costs, while new hardware capabilities can help move more power by upgrading existing line materials using existing transmission pathways.”); Aleksandar M. Stankovic et al., *Methods for Analysis and Quantification of Power System Resilience*, IEEE TRANSACTIONS ON POWER SYS. (2022) (“Traditionally implemented measures, driven by decades of experience, are security and reliability-oriented, and need to be revised to provide adequate resilience. . . . Resilient systems must, therefore, be equipped with appropriate intelligence for leveraging the signals coming from widespread sensors and making sense of them in the identification of these pattern changes.”); Sajadi et al, *supra* note 34 (hoping that their research motivates “a new perspective on emerging power networks and advance the grid planning and optimization frameworks that take advantage of the unique functionalities, complexities, and responsiveness of power electronic devices”); Lau & Hobbs, *supra* note 25, at 44 (Apr. 2021) (“Uncertainty-aware transmission planning can prepare power systems to manage the above risks in several ways. Diversifying resources, by strengthening connections to regions with different resource

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

But progress depends on the willingness of system operators to innovate.⁴⁶ RTOs ought to be well positioned to harness new technologies and embrace efficiency-enhancing practices. Unlike the IOUs that operate most of the non-RTO

bases, provides flexibility to respond to both short-and long-term fluctuations in resource costs and availability. Increased transmission investment can enhance this adaptability.”); *id.* at 46–47 (“[P]lanning models need to recognize how more sophisticated operations will affect the value from transmission and other investments that increase system flexibility and options available to the operator.”); von Meier & Dunn, *supra* note 34 (“Detailed and comprehensive information about operating states before, during, and after an extreme event is necessary to help decision makers to define new heuristics—or even altogether new operating strategies—that will make the system more robust to evolving climate conditions.”).

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

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

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

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

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

power systems,⁴⁷ RTOs do not have any financial stake in particular assets, business models, or technologies. Their non-profit status should allow them to pursue innovation, even when doing so undercuts entrenched industry players.

But transmission-owning IOUs can stand in the way. IOUs, which own the networks that RTOs operate,⁴⁸ can circumvent and subvert RTO decisionmaking processes. IOUs are the only market participants who can bypass regional governance and unilaterally change certain regional market and transmission rules and rates. They use this unique power to insulate themselves from competition and defend their control over transmission rates in order to enrich their shareholders.⁴⁹ IOUs have a peculiar business model that does not reward efficiency or innovation and creates opportunities and incentives to take advantage of captive consumers who have no choice but to pay their local utility's bill.⁵⁰ RTOs could counteract their IOU members by filing a complaint with FERC about inefficient IOU rates or service,⁵¹ but RTOs have never taken such a bold stance against their members and they are powerless to replace the IOUs' preferred rates or overrule the IOUs on various transmission development issues.

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

Under then-existing rules, IOUs could choose line ratings that benefit their own generation resources and disadvantage their competitors.⁵⁵ For instance, most

47. *U.S. Energy Info. Admin., Form EIA-930*, <https://www.eia.gov/electricity/gridmonitor/about> (last visited Nov. 2, 2023) (listing balancing authorities that are responsible for ensuring supply and demand balance and supporting frequency stability); *see also* Glossary of Terms Used in NERC Reliability Standards (Mar. 8, 2023), <https://perma.cc/TN6V-B4YK> (defining balancing authority).

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

49. *Infra* part V.C.

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

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

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

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

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

55. Order No. 881, *supra* note 10, at PP 67-68 (summarizing an RTO market monitors' findings that IOUs have "little or no incentive" to provide accurate ratings and that inaccurate line ratings "can result in restricted flows on certain paths while overloading others and can create a potential for de facto physical withholding of the available transfer capability by transmission owners"); Comment of the Transmission Access Policy Group, FERC Docket No. RM20-16 at 11 (Mar. 22, 2021) (warning that new line ratings technologies could expand opportunities for anti-competitive conduct "by widening the range of potential ratings for a facility, and by giving

IOUs used static or seasonal ratings⁵⁶ that did not accurately reflect energy transfer capabilities. By undervaluing transmission capabilities, these fixed line ratings create “inflexible constraints” in system models that result in higher energy prices and stifle new entry.⁵⁷ Static ratings can also divert planning processes away from valuable investments.⁵⁸ Consumers ultimately bear the costs of these inefficiencies, while IOUs benefit by thwarting their potential generation and transmission competitors. FERC’s 2021 rule aims to address these perverse incentives by requiring IOUs to update line ratings at least hourly based on specified factors.

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

[transmission owners] greater control and discretion to competitively advantage their own generation and disadvantage the generation of others” and urging FERC to impose transparency rules); *TranSource, LLC v. PJM Interconnection*, 168 FERC ¶ 61,119 at P 157 (2019) (noting that the PJM tariff did not then require PJM to verify IOU-provided transmission facility ratings).

56. FERC Staff White Paper, *supra* note 53, at 11–13; Order No. 881, *supra* note 10, at PP 3, 18; Post-Technical Conference Comments of the Independent Market Monitor for PJM, Docket No. AD21-15 at 3 (Sep. 17, 2019) (“In PJM, transmission owners have substantial discretion in the approach to line ratings.”); Monitoring Analytics, *supra* note 54, at 727 (noting that while PJM rules require transmission owners to provide ratings that for various conditions, “there is no requirement that the ratings differ for these operating conditions.”).

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

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

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

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

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

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

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

64. Sun et al., *supra* note 34, at 6.5 (“[I]n an efficient market, market prices and payments should be aligned with the value of services provided by individual assets.”); Order No. 825, *Settlement Interval and Shortage Pricing in Markets Operated by Regional Transmission Organizations and Independent Systems Operators*,

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

On other issues, both incumbent generation owners and transmission-owning IOUs are allied against reforms that could benefit consumers and IOU competitors.⁶⁶ For instance, “much of the electric power industry continues to rely on legacy [planning] processes to create a stable operational and financial environment” for incumbent firms and technologies.⁶⁷ Because they prioritize stability, these transmission expansion planning processes overlook new projects that might disrupt local markets.⁶⁸ Lack of connectivity between RTOs and between RTOs and non-RTO regions keeps local incumbents in control and results in trading patterns that “significantly deviate from the least-cost ideal.”⁶⁹ Profits accrue to high-cost generators within each insufficiently connected region who would be dis-

155 FERC ¶ 61,276 at P 1 (2016) (addressing “practices that fail to compensate resources at prices that reflect the value of the service resources provide to the system”); Transmittal Letter of PJM Interconnection, FERC Docket No. EL19-58, at 4–5 (Mar. 29, 2019) (endorsing the principle); *ISO-NE*, 173 FERC ¶ 61,106 at P 7 (“ISO-NE explains that it suffers from a ‘misaligned incentives’ problem, which occurs when market participants’ private incentives to take action to improve their ability to provide energy in real-time do not align with society’s interest in such arrangements.”); Remarks of J.T. Smith, *supra* note 62, at 1 (“Transmission line ratings are a fundamental input to the reliable and efficient management of Bulk Electric System. Ratings are the basis of decisions made across the operating horizon including our real time operations, day-ahead management, and long term planning initiatives.”); Comments of the Southwest Power Pool Market Monitoring Unit, FERC Docket No. RM20-16 at 1–2 (Mar. 22, 2021) (“Inaccurate measurement and/or reporting of maximum line capacity that does not accurately represent actual near-term transfer capability of the transmission system ultimately would cause price distortions in markets run by regional transmission organizations.”). Alignment of market prices and value to the system is central to achieving the RTOs’ foundational purpose of maintaining “reliability through markets. See CAISO, *Introduction to the ISO Markets*, in 1998 ANNUAL REPORT ON MARKET ISSUES AND PERFORMANCE, <https://perma.cc/YCF5-WUGL> (“The motto of California’s restructured energy industry in general, and the California ISO in particular, is ‘Reliability through Markets.’”); Response of ISO New England to Competitive Market Group’s Paper, FERC Docket No. ER00-971 at 1 (Feb. 3, 2000) (“ISO-NE is fully committed to providing a reliable bulk power supply through effective and efficient markets. . . .”); Presentation of Ronald R. McNamara, Vice President of Market Management, FERC Docket No. AD06-2 at 3–4 (Jan. 25, 2006) (explaining the RTO’s “reliability through markets” approach to short-term operations).

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

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

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

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

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

placed by lower-cost generation that would benefit from the interregional connection. Incumbent generators and transmission owners therefore do not pursue interregional connections because they might diminish their pricing power or local control. Similarly, legacy asset owners are also likely to oppose reforms that can accelerate the interconnection of competing resources.⁷⁰ As I describe in part V.C, IOUs hold have authority and informal influence that allows them to disrupt efforts to link across regions and connect new generators to the network.

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

Dynamic line ratings and interregional transmission are low-hanging fruit. Neither rely on unproven technologies nor require untested methodologies. Both would provide easily capturable efficiencies that would benefit consumers. Without governance reforms, the long-term prospects for innovation appear dim. Innovation in backend operations and planning can enable system operators “to reduce consumption, to better exploit renewable sources, and to increase the reliability and performance of the transmission and distribution networks.”⁷⁷ This

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

71. See, e.g., *Variable Line Rating Information*, TRANSPOWER, <https://perma.cc/WPH8-Z8VM> (last visited Nov. 2, 2023) (showing that New Zealand’s system operator uses variable line ratings for 15 “key circuits”); *Dynamic Line Rating*, ELIA, <https://perma.cc/HV6J-4AJV> (last visited Nov. 2, 2023) (showing that Belgium’s system operator uses dynamic line ratings for more than two dozen lines); Jonathan Spencer Jones, *Energinet’s dynamic line rating improves overhead capacity by up to 30%*, SMART ENERGY INT’L. (Jun. 1, 2023), <https://perma.cc/CT4G-HSAR> (reporting that the Danish system operator implemented dynamic line ratings on around 20 lines and plan to implement them on 70 lines).

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

73. *Electricity Interconnection Targets*, EUROPEAN COMM’N, <https://perma.cc/JUF9-XR2X> (last visited Nov. 2, 2023) (stating that the EU had set a target that by 2030 each country should have sufficient capacity to transfer 15% of the electricity produced within its borders to neighboring countries).

74. Peter Markussen, *Inter-Regional Transmission Targets in Europe*, ENERGINET TRANSMISSION SYS. OPERATOR (Nov. 28, 2022), <https://perma.cc/DHY7-BZVK>; Joskow, *supra* note 46, at 74–75 (describing the ENTSO-E processes).

75. James McCalley & Qian Zhang, *MacroGrids in the Mainstream: An International Survey of Plans and Progress*, AMERICANS FOR A CLEAN ENERGY GRID, at 5 (Nov. 2020), <https://perma.cc/3HUC-HEL6>.

76. *Id.*

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

vision of the “future grid will generally be characterized by more sensors, more communication, more computation, and more control,”⁷⁸ and will likely require installing new devices on assets owned by incumbents in order to change how they operate. Incumbent control over whether to install these devices or alter their assets’ operations may be fatal to innovation.

Transmission operations and planning are necessarily monopoly functions that therefore require regulatory oversight.⁷⁹ States have no authority over transmission operations and only minimal visibility into regional transmission planning through state regulatory processes. New technologies are exposing inefficiencies with existing practices and revealing opportunities to reduce costs and improve reliability. Independent regional governance can be an engine for innovation, but FERC must weaken incumbents’ formal authority and counteract their informal influence over decisionmaking.

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

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

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

78. *Id.*

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

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

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

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

management [control] with the interests of shareholders [ownership] and to incentivize management to act in the corporation's best interest."⁸³

RTOs do not have shareholders, and thus RTO governance does not need to address the traditional mismatches between shareholders and managers at for-profit corporations. Instead, RTO governance aims at preventing "control, and appearance of control, of decision-making by any class of participants" or individual companies.⁸⁴ When FERC authorized RTO development, it believed RTOs could be an antidote to the "fundamental mistrust of transmission owners"⁸⁵ in the industry that was impeding market development and adversely affecting reliability.⁸⁶ For decades, IOUs had engaged in "systemic anti-competitive behavior" designed to reinforce their dominance over the nation's power sector.⁸⁷ Encouraging utilities to place their regional transmission assets under RTO control was part of FERC's broader efforts to eliminate "unduly discriminatory" transmission service the Federal Power Act (FPA). FERC's hope was that remedying undue discrimination would unleash competition in wholesale power markets and ensure just and reasonable rates.⁸⁸ FERC was concerned, however, that its pro-market agenda would "not be successful unless all market participants believe that the RTO will operate the grid and provide transmission service to all grid users on a non-discriminatory basis."⁸⁹ FERC believed that for RTOs to become "beneficial

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

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

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

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

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

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

89. Order No. 2000, *supra* note 15, at pg. 5.

platform[s] for both competition and reliability,”⁹⁰ RTOs needed to “be independent in both reality *and perception*”⁹¹ from IOUs and other market participants.

Beyond this independence requirement, FERC did not instill RTOs with foundational principles to guide their decisionmaking. Instead, FERC assigned RTOs eight transmission-related functions and required that they employ “market mechanisms” to provide reliable service.⁹² To accomplish these tasks, RTOs act within the rules enshrined in FERC-jurisdictional documents, such as their transmission tariffs,⁹³ as well as self-approved business practice manuals.⁹⁴ Because RTOs provide transmission service and facilitate energy trades that fall under FERC’s jurisdiction,⁹⁵ all RTO market and transmission rules must receive FERC’s approval. FERC evaluates proposed rules under the FPA’s “just and reasonable” and not “unduly discriminatory” standards.⁹⁶

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

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

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

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

92. *Id.* at pgs. 131, 154–55.

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

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

95. 16 U.S.C. § 824(b)–(e).

96. 16 U.S.C. §§ 824d, 824e.

97. See Kate Konschnik & Ari Peskoe, *Climate Implications of FERC Proceedings*, HARVARD ENV’T & ENERGY LAW PROGRAM (Nov. 2017), <https://perma.cc/2T92-3YXK> (explaining that RTO rules “can implicitly benefit particular technologies by favoring certain resource attributes and thereby and push the development of the grid in particular directions” and may “directly benefit particular resource types.”).

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

Tariff filing authority is consequential. With each FERC filing, the tariff filer implicitly favors particular market participants and prioritizes their financial interests.⁹⁹ To approve a proposed tariff amendment, FERC must find only that the proposal is “just and reasonable” under the FPA and need not conclude that the proposal is the best among possible options.¹⁰⁰ Market participants routinely disagree about market reforms, and it is often plausible that FERC could find any of their proposals to be just and reasonable. But only the entity or entities with “filing rights” can impose their preferences on the industry (with FERC approval). The tariff filer can also choose not to pursue any changes at all and instead maintain the status quo.

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

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

100. See, e.g., *Cities of Bethany, et al. v. FERC*, 727 F.2d 1131, 1136 (D.C. Cir. 1984) (summarizing that the standard in rate decisions is “not whether [one] method is more appropriate than [another] method, but rather whether the [proposed] method is reasonable and adequate”); *Cal. Indep. Sys. Operator*, 128 FERC ¶ 61,282 at P 31 (2009) (“[T]he issue before the Commission is whether the CAISO’s proposal is just and reasonable and not whether the proposal is more or less reasonable than other alternatives. Therefore, because we find the CAISO’s proposal to be just and reasonable, we need not assess the justness and reasonableness of [an] alternative proposal.” (citations omitted)).

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

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

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

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

The connections between RTO governance, tariff filing rights, and FERC's authority to remedy unduly discriminatory transmission service suggests that FERC ought to have sweeping jurisdiction over RTO governance. However, two D.C. Circuit decisions limit FERC's authority to oversee regional transmission governance. In 2002, the court effectively overturned FERC's requirement that RTOs have exclusive rights to file proposed transmission tariff changes. The D.C. Circuit panel held that transmission-owning utilities have "filing rights" under section 205 of the FPA that FERC cannot abolish, thus handing back to utilities a measure of control over regional transmission that FERC sought to eradicate. Two years later, the D.C. Circuit vacated a FERC order that directed the California ISO (CAISO) to replace its board through a process dictated by FERC.¹⁰⁵ The panel found that FERC's order amounted to an "unprecedented invasion of internal corporate governance"¹⁰⁶ that could not be sustained by FERC's limited jurisdiction over utility practices that "directly affect the rate."¹⁰⁷

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

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

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

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

106. *Id.* at 399.

107. *Id.* at 403.

108. See *infra* part IV.C.

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

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

In 1977, FERC took a small but legally significant step toward regulating regional governance. Eleven IOUs had proposed a "power pool" that would enable regional sharing of back-up generation and coordinated long-term planning. FERC found that the agreement would exclude smaller utilities from the IOU-run pool and ordered the IOUs to file non-discriminatory membership criteria. FERC explained that the "oftentimes subtle and yet significant long-term impact of power pooling demands our close scrutiny of provisions which deny access to the benefits of the pool."¹¹³ It concluded that the proposed membership criteria were not "sufficiently quantitative to assure objective and nondiscriminatory interpretation."¹¹⁴ FERC's order recognized — for the first time — the connection between jurisdictional rates and participation in a regional utility alliance.¹¹⁵

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

FERC determined that, to receive its approval, an RTG agreement "should include fair and non-discriminatory governance and decisionmaking procedures, including voting procedures."¹¹⁸ FERC explained that an "RTG should have rules or procedures to protect the rights of entities that are more susceptible to the exercise of market power," such as market participants that depend on IOU-owned

109. 16 U.S.C. § 824(c), (d).

110. 16 U.S.C. §§ 824d, 824e.

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

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

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

114. *Id.* at 2636.

115. *Id.* at 2635–36.

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

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

118. *Id.* at 41,631.

transmission to deliver power, and that, in general, “if the voting rules permit transmission owners to dominate the RTG . . . this would disadvantage weaker users and would be unfair.”¹¹⁹

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

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

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

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

RTOs build upon FERC’s Open Access transmission rules that set national standards for transmission service. Order No. 888, which created Open Access standards in 1996, marked FERC’s first industry-wide transmission rule. FERC had previously regulated utilities on a tariff-by-tariff basis, limiting its findings of unjust and unreasonable rates or unduly discriminatory service to a single utility’s

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

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

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

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

123. *Id.* at 41,629.

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

terms of service.¹²⁵ But in Order No. 888, FERC relied on “general findings of systemic monopoly conditions” and the “potential for anti-competitive behavior” across the industry to justify a new approach.¹²⁶

Absent regulatory intervention, FERC predicted that IOUs would unduly discriminate because “the inherent characteristics of monopolists make it inevitable that they will act in their own self-interest to the detriment of others by refusing transmission and/or providing inferior transmission to competitors in the bulk power markets.”¹²⁷ Having found undue discrimination on an industry-wide basis, FERC took remedial action against the entire industry. It ordered all IOUs to file Open Access transmission tariffs that would provide uniform rates, terms, and conditions to all users.¹²⁸ FERC also attempted to open the industry’s “black box of transmission information” and prevent IOUs from buying and selling energy using non-public transmission information.¹²⁹ With these reforms, FERC hoped to eliminate unfair barriers to market participation that were embedded in IOU tariffs in order to unleash competition in wholesale power markets.

To support this vision, FERC concluded that it had to prevent utilities from “trad[ing] with a selective group within a power pool that discriminatorily excludes others from becoming a member and that provides preferential intra-pool

125. See, e.g., *St. Michaels Utils. Comm'n v. FPC*, 377 F.2d 912, 915 (D.C. Cir. 1967) (In a case reviewing claims of undue discrimination, “judicial inquiry devolves on the question of whether the record exhibits factual differences to justify classifications among customers and differences among the rates charged them.”); *Cities of Newark, et al. v. FERC*, 763 F.2d 533, 546 (3d Cir. 1985) (explaining that in determining whether rates are unduly discriminatory, FERC considers whether “differences in rates are justified where they are predicated upon factual differences between customers and that these differences may arise from differing costs of service or otherwise.”); *Ala. Elec. Co-op. v. FERC*, 684 F.2d 20, 29 (D.C. Cir. 1982) (explaining that FERC finds undue discrimination when a utility fails to justify a rate disparity among customers or customer classes); *Am. Elec. Power Serv. Corp.*, 67 FERC ¶ 61,168 at p. 61,490 (“[T]raditionally the focus of our undue discrimination analysis has been whether factual differences justify different rates, terms and conditions for similarly-situated customers.”).

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

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

128. Order No. 2000, *supra* note 15, at pg. 210 (stating that in Order No. 888 its “primary focus, both in terms of access and pricing was comparability; that is, all transmission users should receive access under rates, terms and conditions comparable to those the transmitting utility applies to itself to serve its own customers.”); Order No. 888, *supra* note 84, at 21,547–49 (discussing FERC’s “Comparability Standard”). FERC also required IOUs to “unbundle” energy sales and transmission service by charging separate rates for each, which would facilitate delivery of non-IOU generated power over IOU transmission. *Id.* at 21,552.

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

transmission rights and rates” to IOUs.¹³⁰ FERC therefore ordered IOUs to remove provisions in power pool and other agreements that granted IOU members superior transmission access.¹³¹ FERC encouraged IOUs to replace power pools with RTOs, new entities that would operate IOU-owned transmission facilities and provide uniform service to IOUs and all other users.¹³²

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

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

Because RTOs would operate interstate transmission, FERC would regulate them as “public utilities” under the FPA,¹³⁵ and their transmission tariffs would have to meet with FERC’s newly issued Open-Access standards. Dan Walters and Andrew Kleit explain that “by branding RTOs as utilities that must file their own tariff, and by mandating that RTOs remain truly independent from their constituent users, FERC created a brand-new need for institutional machinery to facilitate governance of the relationship between now-unbundled subsectors of the industry.”¹³⁶ FERC oversight of RTO governance ensures some transparency about regional decisionmaking and provides opportunities for participation. By contrast, in non-RTO regions, decisions about regional industry coordination are made behind closed doors, in IOU C-suites and corporate boardrooms.¹³⁷ Non-IOU firms

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

131. *Id.*

132. *Id.*

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

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

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

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

137. The development of the “Southeast Energy Exchange Market (SEEM) by IOUs in the region illustrates how major regional decisions are made without public input. *See* John Downey, *Exclusive: Duke Energy, Southern Co. and Others in Talks to Establish a Southeast Energy Market*, CHARLOTTE BUS. J. (Jul. 14, 2020) (reporting that Southern Company was a “prime mover” in the effort to forge SEEM, that the utilities had signed non-disclosure agreements about their talks, that state regulators were unaware, and that industry stakeholders were concerned that the IOUs were trying to preempt public discussions about the future industry structure); Letter from Clean Energy Groups, North Carolina Public Utilities Commission Docket No. E-100 Sub 171 (Dec. 21,

have no authority, and even industry regulators may be left in the dark. In RTOs, the degree of transparency and participation in decisionmaking varies depending on the governance arrangements proposed by IOUs and ultimately approved by FERC. I discuss the details in part V and focus here on how FERC attempted to prevent IOUs from directly controlling RTOs.

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

Having lost their bids for direct control over an RTO, PJM utilities went to court seeking another mechanism to maintain control over regional power sector rules. They challenged FERC's rejection of their proposal to empower themselves to file certain transmission tariff amendments without the approval of the PJM RTO. To protect the RTO's independence, FERC had determined that the RTO should have exclusive and unilateral authority to file changes to transmission rate design and terms of service, leaving IOUs with authority only over filings about the total amount of money collected from transmission rates.¹⁴⁰ In *Atlantic City*, the D.C. Circuit sided with the IOUs, holding that transmission-owning utilities have "filing rights" under section 205 that FERC may not revoke. The court noted that IOUs may choose to voluntarily give up rights by contract.¹⁴¹

The D.C. Circuit's decision in *Atlantic City* forced FERC to reconsider the scope of independent governance. FERC believed that RTO control over tariff amendment filings was necessary to ensure that market and transmission rules would be "developed in accordance with the [FERC-approved] governance process,"¹⁴² which would mitigate the potential for unduly discriminatory service.¹⁴³ The D.C. Circuit's decision empowered IOUs to bargain with the RTOs they had created about the scope of independence. Emboldened by the D.C. Circuit's holding, IOUs negotiated to retain filing rights over various regional transmission rules. FERC approved settlements between RTOs and their utility members that

2020) (responding to Duke Energy's recent filing about SEEM and alleging that SEEM "was created by a consortium of utilities and was neither customer-led nor developed with input from state policymakers or other stakeholders.").

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

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

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

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

142. 81 FERC ¶ 61,257, at 62,279.

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

allocated filing rights,¹⁴⁴ although it warned utilities that it could revisit those agreements if utilities wield their rights in a way that compromises RTO independence.¹⁴⁵ (Spoiler alert: FERC has not revisited IOU filing rights. In Part VI, I suggest FERC finally do so.)

Meanwhile, prior to the *Atlantic City* decision, FERC issued Order No. 2000, which required all IOUs to consider ceding operational control of their transmission assets to an RTO.¹⁴⁶ The accompanying RTO guidelines repeatedly tie RTO governance to FERC's anti-discrimination agenda.¹⁴⁷ FERC emphasized that "independence is the bedrock" upon which RTOs must be built,¹⁴⁸ because it concluded that an "RTO will not be successful unless all market participants believe that the RTO will operate the grid and provide transmission service to all grid users on a non-discriminatory basis."¹⁴⁹ FERC therefore instructed that RTOs must be "independent in both reality and perception,"¹⁵⁰ explaining that "without such independence, it will be difficult for an RTO to act in a non-discriminatory manner."¹⁵¹ Ultimately, FERC "believe[d] that the use of RTOs throughout the country, with the required independence from market participants, can reduce opportunities for unduly discriminatory conduct."¹⁵²

FERC articulated three main criteria for judging independence: 1) RTO employees and directors may not have any financial stake in any market participant; 2) the RTO "must have a decisionmaking process that is independent of control by any market participant or class of participants,"¹⁵³ and 3) the RTO must have exclusive and independent authority to file changes to its transmission tariff.¹⁵⁴ The D.C. Circuit effectively weakened the third criteria in *Atlantic City*, leaving the same independence criteria that FERC created in its 1996 Open Access order.

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

145. 105 FERC ¶ 61,294, at P 33.

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

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

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

149. *Id.* at pg. 85.

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

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

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

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

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

FERC did not impose specific requirements on RTO decisionmaking structures and processes, in part because it concluded that based on its “limited experience” with independent governance, it was “premature to conclude that one form of governance is clearly superior to all other forms in every situation.”¹⁵⁵

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

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

Second, using its authority under FPA section 206 to remedy unjust and unreasonable rates or unduly discriminatory service, FERC occasionally imposes changes to transmission service or market rules. For instance, FERC requires all RTOs to provide market rules that do not unduly discriminate against storage resources, such as batteries, or aggregations of resources connected to a utility’s local delivery system.¹⁵⁸ These orders recognize that RTO “market rules [were] designed for traditional resources [and] can create barriers to entry for emerging

155. *Id.* at pg. 94.

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

157. FERC has said that it does not defer to RTO filings just because they are developed through stakeholder processes. *See PJM Interconnection*, 162 FERC ¶ 61,139 at P 136 (2018) (FERC “determines the merits of a proposal independent of the outcomes of the stakeholder process.”); *SPP*, 152 FERC ¶ 61,226 at P 116 (2015) (“While we accord an appropriate degree of deference to stakeholder processes, our decisions are based on our review of the record to determine whether a proposal is just and reasonable.”); *but see New England Power Pool, et al.*, 105 FERC ¶ 61,300 at P 22 (“Generally, the Commission has clearly indicated . . . that it will give deference to regional choices, particularly the choices of the [Regional State Committees], on how to allocate the costs of transmission expansions.”); *ISO-NE, et al.*, 132 FERC ¶ 61,122 at P 22 (2010) (“While ‘stakeholder consensus is an important factor to be considered in reviewing the just[ness] and reasonableness of a rate design,’ it is also the case that ‘stakeholder support alone cannot ultimately prove that a rate design is just and reasonable.’”) (citing *Am. Elec. Power Serv. Corp. v. MISO*, 122 FERC ¶ 61,083 at P 172 (2008) and *Pub. Serv. Comm’n of Wisconsin v. FERC*, 545 F.3d 1058, 1062–65 (D.C. Cir. 2008)).

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

technologies.”¹⁵⁹ FERC may also order changes to an individual RTO’s rules upon a finding that existing rules violate the FPA’s ratemaking standards.

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

Rarely, FERC has provided different compliance options for RTOs and IOUs. In its first order amending Open-Access rules, FERC concluded that IOUs were obstructing competition in power markets by adding costs and delays to new generators’ connection requests.¹⁶² To limit IOUs’ opportunities to impede competition by manipulating the interconnection process, FERC required transmission providers to follow standardized procedures for connecting new generators to the transmission network. Because RTOs do not own generation that might be harmed by new generators, FERC understood that an RTO is “less likely to act in an unduly discriminatory manner than a transmission provider that is a market participant.”¹⁶³ It therefore provided RTOs with “greater flexibility to customize its interconnection procedures” and committed to providing leeway when it reviewed RTO compliance filings.¹⁶⁴

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

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

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

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

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

163. *Id.* at P 827.

164. *Id.* at P 828.

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

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

But FERC never finalized this proposal.¹⁶⁹ Political pushback, as well as the *Atlantic City* and *CAISO* decisions, held back FERC's efforts.¹⁷⁰ By July 2005, FERC terminated its proposed rulemaking and pulled the plug on its efforts to require and regulate independent grid governance. The two losses at the D.C. Circuit and firestorm on Capitol Hill over its Standard Market Design proposal seemed to have left a mark, but perhaps the root cause of FERC's retreat was the crisis of confidence in FERC's new market-based regulatory regime triggered by the Western Energy Crisis.¹⁷¹

As FERC was in the midst of encouraging utilities to form RTOs, prices spiked in the CAISO market in May 2000. Over the course of the next year,

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

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

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

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

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

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

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

wholesale prices were persistently high and California consumers faced several supply shortages. FERC later summarized that the so-called “2000-2001 energy crisis in the West was the result of a confluence of factors,” including “flawed market rules . . . and market manipulation.”¹⁷² FERC expended considerable resources tracking and investigating the rapidly evolving situation and ordered extensive changes to California’s wholesale markets.¹⁷³ Meanwhile, California also attempted to remedy its beleaguered power sector.

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

In July 2002, approximately eighteen months into the state-appointed board’s tenure and one year after wholesale prices returned to normal levels, FERC addressed the CAISO board’s “independence problem.”¹⁷⁵ FERC rejected CAISO’s California-imposed bylaws and directed CAISO to replace its state-appointed board with an independent board. FERC supported its order with three distinct factual findings. First, FERC concluded that CAISO “is not sufficiently independent to operate its interstate transmission facilities on a non-discriminatory basis” because its “decision-making process is heavily influenced, if not completely dictated, by one stakeholder (i.e., the State).”¹⁷⁶ Second, the state-run board “poses a barrier to the implementation of market redesigns that are necessary to rehabilitate the CAISO and Western markets.”¹⁷⁷ Third, FERC found that the state-appointed board raised “jurisdictional issues.” In particular, “pervasive control over a public

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

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

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

175. *Id.* at P 6.

176. *Id.* at PP 49–50.

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

utility by the State conflicts” with FERC’s regulation of wholesale markets and transmission, interferes with CAISO’s filing rights under section 205, and “conflicts with the independence requirements of Orders No. 888 and 2000” and FERC’s December 2000 order about the CAISO board.¹⁷⁸ CAISO and two state agencies petitioned the D.C. Circuit to review FERC’s orders.

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

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

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

178. *Id.* at PP 54–56.

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

180. *Id.*

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

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

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

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

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

186. *Id.*

187. *Id.*

implications, as FERC could then claim authority over executive and board appointments over any utility, including publicly traded utility companies.

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

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

FERC does sporadically audit RTO independence. Through in-person visits, document reviews, and interviews, FERC’s staff determine whether RTOs are following their own written procedures.¹⁹⁴ FERC audits do not interrogate whether

188. *Id.* at 403.

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

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

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

192. *Id.* at P 36.

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

194. *See, e.g.*, Letter Order, Docket RT04-2-017 (Feb. 9, 2009). The enclosed audit report explains the report’s “scope and methodology”:

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

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

the governance structures and processes outlined in various RTO documents actually prevent a particular class of market participants from controlling regional decisionmaking or interfering with RTO independence. FERC's rules require an initial independence audit within two years of an RTO's commencement, and FERC has subsequently followed up with one or two additional audits per RTO that include independence.¹⁹⁵ FERC's audits have occasionally uncovered non-compliance with implementation of the independence principle, although infractions are typically minor.¹⁹⁶

In 2008, FERC tacked on one additional governance requirement to support independent decisionmaking. FERC ordered each RTO to demonstrate its board's "willingness, as evidenced in its practices and procedures, to directly receive concerns and recommendations from customers and other stakeholders, and to fully consider and take actions in response to the issues that are raised."¹⁹⁷ FERC established four criteria for evaluating each RTO board's "responsiveness" to members and stakeholders: "(1) inclusiveness; (2) fairness in balancing diverse interests; (3) representation of minority positions; and (4) ongoing responsiveness."¹⁹⁸ FERC claimed its review of RTO responsiveness would ensure that RTO boards and stakeholders routinely communicate and that boards "equitably consider" all

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

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

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

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

customer or stakeholder views.¹⁹⁹ FERC hoped that formal communications between the board and market participants would reinforce “confidence in RTOs’ . . . independent governance processes.”²⁰⁰

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

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

Although FERC has not imposed new rules about RTO governance, it has reiterated in two proceedings that it has jurisdiction to do so. In 2016, FERC approved funding through the PJM tariff of a new non-profit organization that would coordinate the participation of state consumer advocates in PJM internal decisionmaking processes. In rejecting a generator owner’s argument that FERC has no authority to approve recovery of costs related to stakeholder participation, FERC concluded that “stakeholder process [] provides input that directly affects the content of jurisdictional practices.”²⁰² The stakeholder process, FERC determined, was “a practice that affects the setting of rates, terms, and conditions of jurisdictional services of the type that the Supreme Court has held falls within the Commission’s jurisdiction,”²⁰³ and the funding was “a legitimate business expense of PJM because it facilitates fulfillment of a PJM obligation under the PJM Operating Agreement.”²⁰⁴

In 2019, FERC similarly concluded that it has jurisdiction over membership rules for NEPOOL, which conducts ISO-NE’s stakeholder processes. FERC explained that because NEPOOL votes can “signal” stakeholder approval to FERC and can cause ISO-NE to file proposals at FERC, NEPOOL’s membership rules “directly affect” the filings FERC receives and therefore directly affect FERC-jurisdictional rates.²⁰⁵ However, in a related proceeding, FERC held that it did not

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

200. *Id.* at P 503.

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

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

203. *Id.*

204. *Id.* at P 12.

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

have jurisdiction to order NEPOOL to rescind its prohibition on media access to its meetings. FERC reiterated that while it has jurisdiction over stakeholder processes and membership rules that directly affect rates, attendance by non-voting media members “lacks a direct effect on filings submitted to the Commission.”²⁰⁶ FERC summarized that the “attendance and reporting policies are too attenuated from NEPOOL’s voting process to directly affect jurisdictional rates.”²⁰⁷

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

E. Regional Transmission Planning Proves Ineffective Without Independent Governance

FERC’s long-standing efforts to stimulate regional transmission development illustrate the value of independent governance. In 2007, FERC required each transmission provider (RTOs and IOUs) to formalize transmission development by outlining planning procedures in a transmission tariff.²¹² FERC’s prior Open-Access transmission rules had included only “minimal” guidance on transmission planning, and FERC grew concerned that transmission development might be biased in favor of IOUs’ financial and strategic goals.²¹³ FERC concluded that it

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

207. *Id.* at P 51.

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

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

210. 173 FERC ¶ 61,267 at PP 52, 67.

211. 182 FERC ¶ 61,063.

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

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

could not “rely on the self-interest of [IOUs] to expand the grid in a nondiscriminatory manner,”²¹⁴ and therefore ordered IOUs to sketch out non-discriminatory planning processes that met FERC’s newly created transmission “planning principles,” such as openness and transparency.²¹⁵

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

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

IOUs fought back against regional planning on two fronts. First, IOUs filed suit in a federal appeals court arguing that FERC had no legal authority to mandate regional planning or require competitive transmission development.²¹⁹ As their unsuccessful litigation against Order No. 1000 was playing out, IOUs also attempted to undermine FERC’s pro-competition goals through the compliance process. For instance, IOUs participating in the Southeastern Regional Transmission Planning (SERTP) group proposed to meet FERC’s regional planning mandate by combining each individual utility member’s local plan into a single regional document and allowing developers to propose additional or alternative projects.²²⁰

214. Order No. 890, *supra* note 15, at PP 39, 422.

215. *Id.* at PP 418–603.

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

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

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

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

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

IOUs designed the process to create insurmountable barriers to new entrants, as it was exceedingly unlikely that an IOU would choose a competitor's project, particularly if it displaced the IOU's own investment. FERC rejected this approach and instructed the IOUs to "conduct a regional analysis themselves." But this, too, was doomed to fail. An impartial regional analysis would pit IOUs against each other and force them to compete against non-IOU developers.²²¹ FERC's procedural requirements could not create a level playing field that would prevent IOUs from either favoring their own projects or shunning regional planning entirely and instead developing projects through local processes that each IOU controlled.

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

IOU discretion undermined FERC's hopes for regional transmission development.²³⁰ FERC's 2007 rule recognized that process-oriented transmission rules left IOUs with substantial discretion in implementing their tariffs.²³¹ In exercising their discretion, IOUs have "opportunities to unduly discriminate" against potential competitors.²³² FERC hoped to constrain IOU discretion in planning by requiring third-party access to data and planning models and non-discriminatory participation. But because FERC left IOUs in charge of administering these

221. *Id.* at PP 58–64.

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

223. 144 FERC ¶ 61,054 at P 78; 147 FERC ¶ 61,241 at P 145.

224. 144 FERC ¶ 61,054 at P 81.

225. 147 FERC ¶ 61,241 at P 144.

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

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

228. 147 FERC ¶ 61,241 at P 282.

229. 144 FERC ¶ 61,054 at P 78.

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

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

232. *Id.* at PP 26, 39–41, 68, 88, 422–24, 524.

processes, IOUs retained opportunities to favor their own interests.²³³ In Order No. 1000, FERC doubled down on IOU discretion, repeatedly emphasizing that transmission providers have significant “flexibility” in creating their own processes, which provided them with further leeway to tilt planning so it would benefit their interests.²³⁴

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

V. FERC SHOULD REVIVE ITS INDEPENDENT GOVERNANCE AGENDA

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

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

A. Governance Stagnation Benefits Incumbents

FERC’s independence principle encompasses “fair representation” and “neutrality” standards that require RTOs to provide “all users” with representation in decisionmaking processes and prevent any particular type of user from controlling

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

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

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

RTO decisionmaking.²³⁶ To implement these requirements, RTOs group their market-participant members or other stakeholders into “sectors.” Key RTO-member committees, that either hold tariff “filing rights” or influence the RTO Board’s filing decisions, act through sector-based voting.

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

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

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

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

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

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

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

240. *Id.*

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

242. *Id.* Lenhart and Fox elaborate that “sector membership often includes a diversity of interests *within* a sector.” For instance, “in some RTOs, the end use sector strictly represents large industrial or commercial users. In other RTOs, these stakeholders are grouped with consumer advocates, and in two RTOs the end user’s sector includes environmental organizations.” Lenhart & Fox on Participatory Democracy, *supra* note 237, at 8.

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

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

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

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

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

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

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

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

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

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

Alternatively, our hypothetical battery developer might join the generation owner sector.²⁵⁰ The dynamics of this sector are shifting. The generation owner sector has been controlled by owners of legacy assets that pre-date Open Access transmission and owners of newer natural gas fired plants that benefited from Open Access rules. In general, these incumbents defend the status quo, agreeing with PJM's assessment nearly a decade ago that the then-effective rules "successfully attracted significant new merchant investment in generating plants."²⁵¹ Newer entrants, particularly wind and solar developers, argue that rules were designed around legacy technologies and must be changed to enable their resources to participate fairly in the market. I will not litigate these arguments here. The salient point for this discussion is that incumbent technologies and business models have historically outnumbered wind and solar firms in the generation owner sector, giving them dominant voting shares and control over sector delegates in key committees.²⁵² However, membership is shifting in favor of clean energy interests, and it seems plausible that while fossil-fuel powered capacity will continue to lead the regional generation mix, clean energy interests could soon have a majority in the generation owner sector.²⁵³ Our hypothetical battery developer will surely find allies in the generation owner sector, but many sector members are prioritizing capacity auction rules and other issues.

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

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

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

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

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

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

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

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

PJM IOUs' valuations are almost entirely dependent on cost-of-service rates regulated by FERC or state regulators.²⁵⁷ Like much of the utility industry, PJM IOUs have largely retreated from competitive lines of business that earned market-based rates.²⁵⁸ Their shift in business strategy coincided with FERC's attempt to open cost-of-service transmission rates to new entrants.²⁵⁹ RTO-member IOUs responded with vigorous opposition to FERC's efforts to facilitate new entry. They zealously protect their near-exclusive access to cost-of-service rates billed through an RTO tariff and tend to speak with one voice on major transmission issues, particular about competition.²⁶⁰ IOUs derive significant value from their exclusive access to cost-of-service rates.²⁶¹

The PJM transmission owners recently took preemptive action to prevent potential new entrants from wielding the transmission owners sector's formal authority. The IOUs changed their sector voting rules to allow a supermajority of ownership interests, measured by combined transmission asset value, to supersede a majority of individual votes. The changes were aimed at ensuring perpetual incumbent control. As the incumbents told FERC, the voting amendments "prevent

257. FERC regulates transmission rates. States regulate local distribution for all utilities. For vertically integrated utilities, states also provide cost recovery through cost-of-service rates for generation. Dominion (Virginia), American Electric Power (West Virginia), and FirstEnergy (West Virginia) are the PJM transmission owners that own rate-regulated generation within PJM's footprint. American Electric Power, AES, and Duke own rate-based generation outside of PJM. Public Service Gas & Electric owns nuclear plants that sell energy and capacity through PJM auctions and also benefit from New Jersey state policy that funds the plants through charges assessed on retail ratepayers.

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

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

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

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

a tiny minority of Transmission Owners from controlling” the sector,²⁶² and that the amendments would “*protect the PJM [Transmission Owners’] substantial investment.*”²⁶³ FERC approved the new sector voting rules even though it had repeatedly declined to endorse governance arrangements linked to transmission ownership when IOUs first proposed RTOs in the 1990s.²⁶⁴

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

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

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

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

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

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

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

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

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

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

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

that aggrandize the RTO by expanding the scope of its planning responsibilities or adding complexities to its markets.²⁷¹

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

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

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

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

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

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

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

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

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

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

278. *Id.* at § 3.9.1

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

280. *Supra* notes 138–139.

processes, which are based around stagnant sectors, entrench interests that had a seat at the table in the 1990s.

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

Filing a tariff amendment at FERC is the culmination of many RTO rulemaking processes. Each RTO's governance rules determine how amendments are developed. The key players include RTO boards and staff, RTO-member market participants, and stakeholders who do not transact in RTO markets, such as state regulators. Consumer advocates and NGOs may be members or non-member stakeholders, depending on the RTO. Regardless, they are vastly outnumbered and overpowered by asset owners in decisionmaking processes that favor well-resourced and experienced interests.

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

RTO members organize themselves into standing committees that focus on particular technical topics. High-level and technical committees are typically self-governing with the authority to set their own rules on voting and other matters that affect decisionmaking.²⁸⁴ Technical committees, however, may be subject to oversight by a high-level committee whose directives can supersede a technical committee's rules. Participation in technical committees varies by RTO. For instance,

281. See, e.g., ISO-NE Participants Agreement, *supra* note 265, § 11; PJM Operating Agreement, *supra* note 247, § 8; MISO Transmission Owners Agreement, *supra* note 267, article II, § VI; SPP Bylaws, *supra* note 266, §§ 3.0–7.6. Each RTO also has a business practice manual on governance.

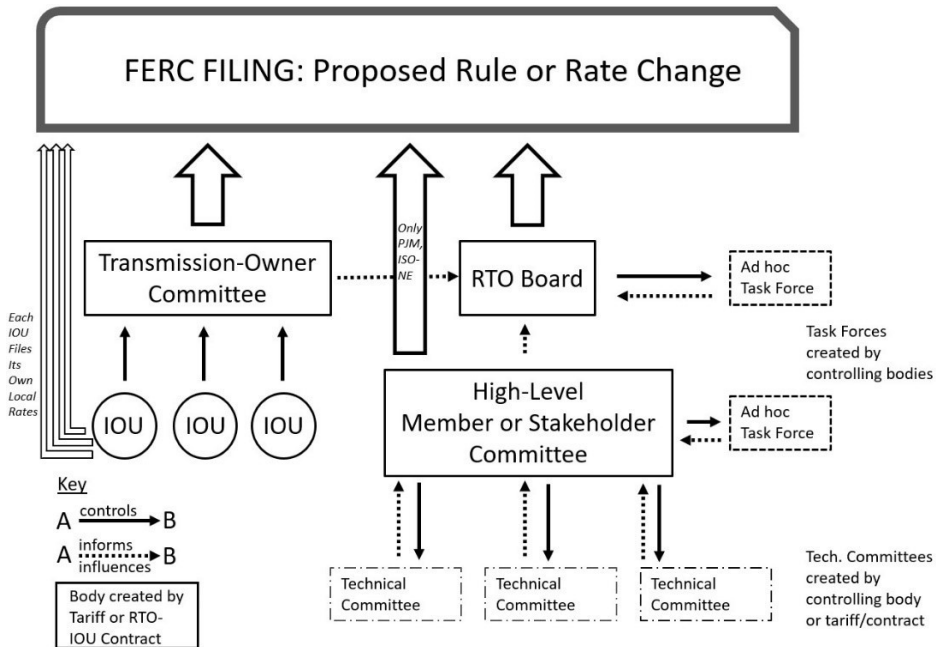
282. MISO Transmission Owners Agreement, *supra* note 267, article II, § VI.A (creating the Advisory Committee and empowering it to be a “forum” for MISO members “to be apprised of MISO’s activities and to provide information and advice to the Board”); SPP Bylaws, *supra* note 266, § 5.1 (empowering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

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

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

non-member stakeholders in SPP may participate in discussions but may not vote on whether to advance a proposed rule to a high-level committee.²⁸⁵

The diagram below captures which entities have filing authority, influence, and control in RTO decisionmaking structures and processes. The block arrows show that each individual IOU, an IOU committee, and the RTO board have filing authority. High-level member committees in PJM and ISO-NE also have filing authority. Because each RTO has unique structures and processes, the diagram cannot capture every variation but instead represents common elements. The diagram does not include staff who perform key functions and are influential in decisionmaking processes.



This structure initially allowed IOUs to sidestep FERC’s independence principle. To satisfy FERC’s independence principle, PJM’s rules restrict IOU votes in a high-level committee to just one of the five member sectors. Because IOUs vote in the transmission owner sector, their collective vote share is capped at 20%. But technical committees do not have such limits. Votes are not sector-weighted, and each of a member’s corporate affiliates has its own vote. Holding companies with multiple affiliates, such as IOUs and certain generation owners, therefore

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

have more votes than an unaffiliated new entrant and more opportunities to influence outcomes.²⁸⁶ When IOUs proposed this governance structure in the mid-1990s, they were invested heavily in generation and owned companies that participated in four of the five PJM sectors. While FERC prevented IOUs and generation owners from dominating the high-level committee, FERC allowed them to have substantial sway in technical committees that perform much of the work in developing new regional rules.

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

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

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

287. *Id.* §§ 6.3–6.7.

288. *Id.* § 8.3.

289. *Id.* § 7 (explaining how task forces and subcommittees function); PJM Stakeholder Manual, *supra* note 286, § 6.7 (noting that PJM staff assign a chair/facilitator for the task force or subcommittee and may also assign PJM technical staff); *id.* § 7.4 (explaining the roles of the PJM-appointed chair/facilitator and noting that PJM may offer its own proposal).

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

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

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

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

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

These stakeholder processes can advantage incumbent interests in several ways. First, companies with multiple corporate affiliates have multiple votes in lower-level committees. In PJM, affiliate voting has historically allowed the two supply-side sectors to control nearly 90% of lower-level votes.²⁹⁵ Second, well-resourced companies have the means to participate in committee processes.²⁹⁶ RTO stakeholders, and in particular consumer interests, have repeatedly complained that meaningfully participating in RTO processes is too expensive and that incumbent corporate interests therefore tend to dominate.²⁹⁷ FERC has recognized the validity of these concerns.²⁹⁸ Third, incumbents may have expertise, relationships, and influence that they have accumulated over 25 years of participation in these processes.²⁹⁹ A new entrant cannot simply acquire this experience.

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

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

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

297. See, e.g., Pre-Technical Conference statements in FERC Docket No. ER09-1048, Jan.–Feb. 2010, filed by Jed M. Nosal, Massachusetts Attorney General’s Office; John Anderson, ELCON; Patrick McCullar, Delaware Municipal Electric Corporation (on behalf of American Public Power Association). See also Lenhart & Fox on Structural Power, *supra* note 6, at 14 (“Stakeholders in each of the studied RTOs describe how some stakeholders are more constrained than others by the time and expertise required to be an influential participant.”).

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

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

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

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

Kleit find that corporatism “exalts certain participants” roles and systemically excludes the full participation of other constituencies, including consumer, environmental, and state interests.³⁰²

This framing of RTO governance obscures the roles of the RTO itself. These elaborate legislative-style processes are usually just advisory, with exceptions noted later.³⁰³ RTO boards make the final decisions about FERC filings, and RTO staff’s prominent duties provide it with substantial influence in regional governance.³⁰⁴ Several recent proceedings suggest that staff influence in rule development processes may be particularly strong when members are unable to achieve a supermajority and therefore cannot elevate a proposal to the board.³⁰⁵

RTO staff are entrenched players in rule development processes. In ISO-NE and SPP, RTO staff routinely develop rule changes that are then vetted through stakeholder processes.³⁰⁶ Elsewhere, staff participate in stakeholder committees, propose their own solutions in rule development processes, and advise the board on stakeholder-approved proposals.³⁰⁷ Staff may also write white papers about contested issues, which may influence deliberations. RTO staff have other formal

302. *Id.* at 1067.

303. ISO-NE Participants Agreement, *supra* note 265, § 8.5 (“Except as expressly agreed by NEPOOL and ISO, each of the Principal Committees . . . shall serve only in an advisory role, and shall have no decisional authority with respect to ISO.”); *id.* § 11 (providing that the ISO shall “shall consult with and receive feedback” from stakeholders prior to changing market rules); MISO Transmission Owners Agreement, *supra* note 267, at article II, § VI.A (“The Advisory Committee shall be a forum for its members to be apprised of MISO’s activities and to provide information and advice to the Board . . . but neither the Advisory Committee nor any of its constituent groups shall exercise control over the Board or MISO.”); SPP Bylaws, *supra* note 266, § 3.1 (“Member input on decision-making shall be accomplished primarily through Membership participation in Organizational Groups.”) (emphasis added); Lenhart & Fox on Structural Power, *supra* note 6, at 11 (stating that stakeholders’ votes “are seen by many stakeholders as simply signaling stakeholder positions for ISO-NE” and that “several stakeholders stated that the process of translating votes into specific market rules lacks transparency and is not constrained by stakeholder votes”).

304. Stafford & Wilson, *supra* note 299, at 228–30 (focusing on MISO and finding that staff has “significant influence” over stakeholder processes and “play a crucial role in facilitating engagement.”).

305. Lenhart & Fox on Structural Power, *supra* note 6, at 10 (noting that SPP stakeholders “expressed concern that market changes and a greater diversity of interests are making it more difficult to reach consensus” and that “these changes are perceived to be contributing to a larger role for staff.”); Kavulla, *supra* note 99, at 9 (summarizing that when PJM members could not agree about an energy market design issue, the Board sent a letter saying it would file a complaint at FERC about the existing rules, since the members hold filing rights. Around the same time, PJM staff issued a whitepaper that supported the board’s position). Similarly, in response to a FERC order determining that PJM’s capacity market rules were unjust and unreasonable, PJM’s board filed proposed rules that were rejected by the high-level members’ committee, *PJM Capacity Construct/Public Policy Senior Task Force Final Report* (Dec. 13, 2018), <https://perma.cc/RNE4-V3UY>, and over “an outpouring of stakeholder opposition.” Protest of Clean Energy Advocates, FERC Docket No. ER18-1314, at 29 (May 7, 2018). MISO’s capacity construct was also controversial among stakeholders. See Protest of the Mississippi Public Service Commission and the Mississippi Public Utilities Staff, Docket No. ER22-495, at 8–28 (2022) (summarizing stakeholder protests of MISO’s FERC filing and concluding that MISO filed its proposal “despite four almost unanimous motions clearly communicating to MISO the stakeholders’ distrust and overwhelming and unaddressed concerns with MISO’s proposal.”).

306. Lenhart & Fox on Participatory Democracy, *supra* note 237, at 13, app. A.

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

duties, including revising business practice manuals that implement tariffed processes³⁰⁸ and developing regional transmission expansion plans.³⁰⁹

Ultimately, however, RTO boards are typically the final decisionmakers and hold filing authority over a broad range of market and transmission rules. The Board's control over the organization's complex operations is markedly different from a typical corporate board. In general, corporate boards supervise senior management and are not deeply involved in operational decisions. Although a board is "ultimately responsible for governing a corporation,"³¹⁰ "the myriad tasks facing such organizations are too burdensome to be carried out by a board of directors alone."³¹¹ Thus the "the modern board's involvement in management of the firm is typically limited to hiring and firing the top management team, approving major transactions, and, perhaps, helping set the broad strategic vision for the firm."³¹²

RTO boards, on the other hand, routinely consider whether and how to tweak highly technical market structures, exercising decisionmaking power that reaches far deeper into the organization's operations than a typical corporate board. RTO board members do not have staff or the capacity to master each technical rule change on their agenda. It seems likely — and entirely appropriate — that boards rely on RTO staff for information and analysis.³¹³ A CEO's presence on the board

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

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

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

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

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

313. Lenhart & Fox on Structural Power, *supra* note 6, at 14 ("RTO boards, in conjunction with management and staff, influence market design through strategic guidance, priority setting, and management of the pace of decision-making."). RTO boards also influence staff priorities. Lenhart & Fox on Participatory Democracy,

provides staff with a prominent role in board deliberations.³¹⁴ In addition, senior RTO staff present at board meetings on a range of topics.³¹⁵ In PJM, RTO staff have an exclusive audience with the board, as the meetings are closed to PJM members, state regulators, and other stakeholders.

The “conventional wisdom” about corporate boards has been that they are “captured by senior management.”³¹⁶ In RTOs, staff’s technical competence *ought to* inform the organization’s decisionmaking. Independent decisionmaking requires robust input from RTO staff. But FERC’s rules also demand that RTO governance “include fair representation of all types of users”³¹⁷ and that RTO boards are “fully aware” of market participants’ positions.³¹⁸ An independent RTO board must consider the commercial implications of its decisions while also ensuring that RTO “members do not exercise undue influence.”³¹⁹ The committee-based deliberative processes described above inform boards of members’ positions. Additional formal mechanisms connect boards with members and stakeholders. In general, these mechanisms provide another means for entrenched players to influence RTO decisions.³²⁰

For instance, delegates from each of PJM’s member sectors meets privately with the PJM board prior to each regularly scheduled board meeting, which provides members with opportunities to weigh in on the board’s agenda and influences its decisions.³²¹ In addition, starting in 2020, each PJM member sector meets privately once a year with the PJM CEO and three PJM board members.³²² In

supra note 237, at 11 (“[P]erhaps the most important role for boards is providing strategic direction and oversight to staff who are critical in agenda setting, sharing information, and creating new venues for discussion.”).

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

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

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

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

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

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

320. Lenhart & Fox on Participatory Democracy, *supra* note 237, at 2 (noting a “natural tension” between the goals of independence and responsiveness) (citing Dworkin & Goldwasser, *supra* note 279).

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

322. Board Disclosures, PJM INTERCONNECTION, <https://perma.cc/53RL-QLUX>. The market monitor and state utility regulators have their own separate opportunities to meet privately with the board, although state regulators have recently met only once per year with the board. *See PJM Interconnection*, 144 FERC ¶ 61,238 at

SPP, the high-level Members Committee meets concurrently with the board and conducts an advisory vote before the board rules on a proposal.³²³ Travis Kavulla observes that because this same committee also elects the board “as a practical matter the members of SPP rule the RTO — even if the SPP board may, as a matter of legal theory, overrule them.”³²⁴ As Kavulla notes, SPP board members may be renominated by a member committee and then reelected by the RTO’s high-level committee, creating a dynamic that might make board members seeking renomination beholden to market participants.³²⁵

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

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

P 9 (2013) (noting that the PJM board meets regularly with the internal market monitor, and board members may contact the market monitor at any time); Organization of PJM States, PJM (July 20, 2023); (OPSI) Factsheet, <https://perma.cc/8Z5E-GNVP> (noting that the board and state regulators meet “at least once a year.”).

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

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

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

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

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

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

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

their views of the industry.³³⁰ These long-time IOU executives have professional networks of top IOU management from across the industry. It seems plausible that these board members are sympathetic to IOUs' positions.

Another nineteen RTO board members are current or former private sector executives across a range of other industries, such as insurance, finance, and consumer products. In their day-to-day jobs, these corporate executives are accountable to their corporation's officers and board. As RTO board members, they must consider wider interests.³³¹ RTO mission or vision statements focus on system efficiency and reliability,³³² but the RTO's foundational purpose is to replace IOU-provided transmission service with non-discriminatory regional operations and planning. This core function ought to put RTOs at odds with their IOU members, which are led by executive and boards who are fully committed to maximizing shareholder returns.³³³ RTOs, on the other hand, are led by part-time board members whose primary professional responsibilities may lie elsewhere and must balance several goals as RTO board members. Expecting RTO boards to be a counterweight to IOU control may be implausible.

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

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

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

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

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

334. PJM Operating Agreement, *supra* note 245, §§ 8.8, 18.6.

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

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

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

MISO state regulators also have non-exclusive authority over regional cost allocation but not over any other issue. Initially, the Organization of MISO States (OMS) merely "played a significant advisory role" in MISO governance.³⁴⁰ FERC later approved formal authority in a 2013 proceeding about MISO's expansion to include an IOU with service territories across four southeastern states.³⁴¹ MISO and its transmission owners agreed to allow OMS to compel MISO to file changes to regional cost allocation when: 1) at least two-thirds of OMS members support the proposal, and 2) MISO itself is already filing its own proposed changes to regional cost allocation.³⁴² OMS can also initiate a stakeholder process to develop cost allocation proposals.³⁴³ OMS enjoys the largest vote share of any sector (16%) in MISO's high-level committee whose votes advise the board.³⁴⁴

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

337. 106 FERC ¶ 61,110.

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

339. *Id.*

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

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

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

343. *Id.*

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

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

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

In energy markets, generator dispatch and prices can also be affected by staff's decisions.³⁴⁷ Transmission expansion planning rests entirely on assumptions and models that are run by staff.³⁴⁸ RTO members and stakeholders have opportunities to provide input,³⁴⁹ and transmission owners have special roles in those processes.³⁵⁰ FERC does not oversee implementation of the planning procedures, and it does not require RTOs (or non-RTO IOUs) to file their regional plans.³⁵¹ As discussed in the next section, IOUs have unique authority to interfere with RTO staff's planning.

C. IOUs Circumvent and Subvert Regional Governance

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

Note that this section focuses on ISO-NE, MISO, and PJM. While some of the dynamics around transmission planning are similar in SPP, its IOU members do not have filing rights over regional issues. However, as noted above, SPP decisionmaking processes divide parties into transmission owners or users, a dichotomy that benefits IOUs.³⁵² Lenhart and Fox report that SPP "is often referred to

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

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

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

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

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

352. *Supra* notes 277–278.

as an RTO that listens to its members” that “seeks unity in decisions” and generally paints the RTO as favorable to incumbent interests.³⁵³ So while SPP IOUs lack the ability to subvert regional decisionmaking with unilateral filing authority, SPP has its own unique structures and culture that elevate IOUs.

The purpose of centralized regional transmission planning is to more cost-effectively achieve reliability, economic, and public policy goals than could be realized if each utility in the region built transmission for its own goals or through ad-hoc partnerships.³⁵⁴ Projects in an RTO’s regional plan are financed through the RTO’s tariff and paid by transmission owners who automatically pass through transmission costs to consumer bills. In general, RTOs allocate construction costs to transmission owners pursuant to methods outlined in the tariff. RTO boards approve regional plans,³⁵⁵ and RTO staff may scrutinize approved projects before and during construction to determine whether they are being developed on-budget and in-line with expectations.³⁵⁶ An RTO can cancel projects under development if the assumptions underlying the project approval prove to be incorrect.³⁵⁷ RTOs run solicitations and other competitive processes to determine who builds certain regional projects.³⁵⁸ Naturally, IOUs prefer to avoid competition.³⁵⁹

Across RTOs, foundational agreements between RTOs and their IOU creators allocate filing rights and planning responsibilities. These agreements, along with RTO tariffs and business practice manuals, explicitly or indirectly limit the scope of an RTO’s planning authority,³⁶⁰ and subordinate RTO regional planning

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

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

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

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

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

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

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

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

to planning conducted by each member IOU within the footprint of its local delivery monopoly.³⁶¹ This hierarchy preferences IOUs' local projects over potential regional development.

Each IOU can itself determine whether a transmission expansion project it is proposing should be "regional" and therefore vetted through the RTO-administered planning process and approved by the RTO board. By simply including the project in its self-approved local plan, the IOU can bypass RTO processes. A recent local plan of Entergy, an IOU in the southeast and MISO member, illustrates how an IOU can limit the scope of RTO transmission planning. In 2023, Entergy proposed \$4 billion of transmission expansion projects across its footprints in Texas and Louisiana, including two 500 kV projects costing \$2.5 billion.³⁶² Such expensive high-voltage projects would ordinarily be planned by MISO according to procedures outlined in its tariff.³⁶³ By designating these 500 kV projects as "local," Entergy avoids the prospect that MISO would award the project to another developer through a competitive process and escapes scrutiny MISO applies to regional projects.³⁶⁴

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

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

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

363. MISO Transmission Owners Agreement, *supra* note 267, appendix B, § 1 ("The following transmission facilities of the Owners shall constitute the Transmission System for which MISO shall be responsible for operating and planning . . . (i) all networked transmission facilities above 100 kilovolts. . . ."); *id.* § I.T ("The transmission facilities of the Owners which are committed to the operation of MISO by this Agreement. These facilities shall include (i) all networked transmission facilities above 100 kilovolts. . . .").

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

365. *Id.* § II.

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

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

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

PJM protested its members’ proposal. PJM told FERC that expanding PJM’s planning role requires the IOUs’ consent.³⁷⁴ The members’ proposed expansion, according to PJM, would be “counter to the authority transferred to PJM” by the region’s IOUs.³⁷⁵ PJM members and stakeholders, meanwhile, urged FERC to

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

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

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

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

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

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

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

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

375. *Id.* (“While the Joint Stakeholders propose to modify the definition of Supplemental Projects in the Operating Agreement, such revisions are counter to the authority transferred to PJM under the [Consolidated Transmission Owners Agreement] CTOA, as the Transmission Owners did not transfer to PJM the authority to

reject the IOUs' filing, arguing that only PJM members, acting through the high-level member committee, have authority to file amendments to transmission planning processes contained in PJM's Operating Agreement.³⁷⁶ PJM's protest reflected its subservience to its IOU members on transmission development. This controversy provided PJM with an opportunity side with its non-IOU members and attempt to increase the scope of its planning responsibilities. Instead, PJM yielded to its IOUs to the detriment of regional control and efficiency.

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

RTO regional planning goals are also vulnerable to IOU interference through their control over regional cost allocation methods. IOUs in PJM and ISO-NE have filing authority over regional cost allocation,³⁸⁰ while MISO IOUs have shared authority with state regulators and MISO itself.³⁸¹ Under Order No. 1000, competition only applies to transmission projects paid for by at least two RTO members pursuant to the RTO's regional cost allocation methodology. By altering regional cost allocation methods, IOUs can assign all project costs to a single IOU and thereby block transmission competition, maintain their local monopolies, and profit by being automatically designated by the RTO as the transmission developer. IOUs in MISO and PJM have proposed several cost allocation methods that effectively exempt projects from competition by allocating their costs to a single IOU.³⁸² Apart from the competitive implications, authority over cost allocation determines who pays how much for regional projects. Cost allocation can significantly affect the scope and scale of regional transmission development, and IOUs have at least attempted to limit regional development through unfavorable cost allocation methods.³⁸³

plan for the enhancement and expansion of the Transmission System for anything beyond 'demands of firm transmission service in the PJM Region.'").

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

377. 172 FERC ¶ 61,136 at PP 82–83.

378. 173 FERC ¶ 61,242 at P 54.

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

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

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

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

383. See, e.g., Jeff St. John, *Grid Operator MISO's Transmission Plan Would Splits Its Region in Two*, CANARY MEDIA (Dec. 7, 2021), <https://perma.cc/XB48-Z3YE> (explaining that MISO proposed to allocate costs

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

Under the foundational RTO-IOU agreements, IOUs claim the exclusive right to file changes to their "revenue requirement," or the amount of money they earn from transmission rates, as well as the structure of those rates.³⁸⁹ This filing right is worded differently in the various agreements. For PJM, FERC determined that IOUs could file this proposed change to network upgrade rates and established a proceeding to determine whether the resulting rates would be just and reasonable.³⁹⁰ For NYISO IOUs, however, FERC held that this proposed change to network upgrade rates was beyond the scope of IOUs' filing rights and therefore rejected their filing.³⁹¹ SPP filed a similar proposal, which FERC rejected.³⁹² In MISO, following several FERC proceedings and a federal court appeal, IOUs

of projects in MISO North only to transmission owners in that region in order to overcome opposition from Entergy, which is in MISO South, that had threatened to derail all regional planning).

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

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

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

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

388. *Id.* at P 42.

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

390. 177 FERC ¶ 61,123 at PP 34–37.

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

392. *SPP*, 183 FERC ¶ 61,015 (2023).

gained the right to profit from network upgrades for new generators.³⁹³ However, a federal court then remanded FERC's order, leaving the status of network upgrade funding in doubt.³⁹⁴ In a separate proceeding, FERC rejected MISO's proposal to apply this funding structure to network upgrades needed to accommodate certain non-utility transmission projects.³⁹⁵

RTOs have filing rights over interconnection procedures outlined in their transmission tariffs.³⁹⁶ Interconnection processes include technical studies that determine whether the transmission system must be upgraded to accommodate energy injections by the new generator. RTOs may delegate technical studies to their IOU members.³⁹⁷ Allowing the IOU to participate in these studies perpetuates the conflicts of interest that FERC sought to neutralize with its 2003 rules.³⁹⁸ The rules do not penalize IOUs for study delays,³⁹⁹ which can forestall market entry for years or even doom projects.⁴⁰⁰ IOUs are also able to insert assumptions into technical studies that increase interconnection costs. In MISO, for instance, some IOUs allegedly "cooked the books" by using "inflated and unrealistic operating scenarios" in interconnection studies in order to raise costs.⁴⁰¹

MISO IOUs have a more direct means of harming their generation competitors. RTOs operate markets for certain grid reliability services, such as the ability

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

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

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

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

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

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

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

400. *MISO*, 158 FERC ¶ 61,003 at P 88 (2017) (rejecting suggestions that the Commission impose penalties for delayed studies); *PJM Interconnection*, 181 FERC ¶ 61,162 at P 133 (2022) (summarizing trade group's comment that PJM's tariff does not impose penalties for delays and that such delays can be costly for generators and can cause them to lose permits or site control); Joseph Rand et al., *Queued Up: Characteristics of Power Plants Seeking Transmission Interconnection As of the End of 2021*, LAWRENCE BERKELEY NAT'L LAB. (Apr. 2022), <https://perma.cc/5A4W-3296> (finding that the "typical duration" for an interconnection process has "increased sharply since 2015" and now exceeds three years); Seel et al. on National Interconnection Costs, *supra* note 386 (finding that average interconnection costs have increased in all five studied regions and that projects that withdraw from the interconnection process have the highest interconnection costs).

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

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

IOUs also hold filing rights over transmission charges assessed on energy imports and exports.⁴⁰⁶ As discussed in part II, IOUs tend to oppose — or at least not advocate for — interregional transmission because it can diminish IOUs' control and undermine their generation investments.⁴⁰⁷ Despite lack of IOU enthusiasm, there is still hope for interregional expansion. Non-utility transmission developers could potentially fill the gap. However, the IOU-set import-export charges are effectively a toll that could challenge the profitability of non-utility interregional transmission.⁴⁰⁸

When IOUs make regionally significant decisions, such as changing the import-export charges, they work through transmission-owner committees created

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

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

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

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

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

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

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

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

PJM-member IOUs zealously protect their special relationship with the PJM. For instance, at their annual closed-door meeting with PJM management and board members, the IOUs expressed concern about “attempts to undermine the unique relationship between PJM and the Transmission Owners” and urged PJM to “take a greater leadership role in policing improper incursions into” the foundational PJM-IOU agreement.⁴¹¹ These veiled threats, sanitized by PJM staff for public disclosure, to the RTO’s leadership are credible. RTOs are dependent on their IOU members voluntarily ceding partial control over their transmission assets. Subject to FERC’s approval, a utility could remove its assets from RTO control, which would diminish the scope of the RTO’s territory and could impair the RTO’s operations and planning, and even lead to the RTO’s dissolution.⁴¹² IOUs continue to threaten to remove their transmission from RTO control.⁴¹³ As a result, RTO boards or management may subordinate regional benefits to IOUs’ financial and strategic interests, or at least implicitly delegate key decisions to IOUs, including issues that RTOs formally control.⁴¹⁴

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

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

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

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

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

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

VI. INDUCING GOVERNANCE REFORMS

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

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

A. *Spurring Reforms with the Independent Entity Variation*

To justify jurisdiction over RTO governance processes, FERC relies on the Supreme Court's 2016 *EPSA* decision that cemented FERC's authority over utility practices that "directly affect" interstate transmission and power rates.⁴²⁰ In *EPSA*, the Court concluded that an RTO rate structure that pays companies to reduce energy use is a utility "practice" that "directly affects" rates and therefore within FERC's authority to regulate. The Court did not set any limits on FERC's "directly affecting" authority by demarcating between those utility practices that directly affect jurisdictional rates and those that do not.

The *CAISO* panel, however, did draw a distinction between utility practices that directly affect rates and "remote things beyond the rate structure that might in

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

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

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

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

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

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

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

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

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

FERC could also revisit existing transmission rules so they distinguish between RTO compliance and IOU compliance. For instance, FERC has already found that transmission planning can be tainted by IOUs’ incentives to unduly discriminate.⁴²⁶ But FERC’s transmission planning rules do not impose stricter requirements on IOUs as compared to RTOs. As noted in part IV.e, non-RTO IOUs have not planned any projects pursuant to FERC’s regional planning rules, a simple fact that provides a straightforward basis for reopening the regional planning rule for the limited purpose of adding requirements for non-RTO IOUs.

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

422. *Id.* (emphasis added).

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

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

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

426. *Supra* notes 213–14.

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

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

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

B. *Supporting Independence with a Transparency Principle*

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

However, as I've discussed, both the independence principle and responsiveness criteria favor incumbents over new entrants and stasis over innovation. Because governance has stagnated, decisionmaking processes centered around member sectors benefits entrenched firms. Similarly, RTO board "responsiveness" can

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

428. *Peskoe*, *supra* note 412.

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

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

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

432. *Id.* at P 503.

provide entrenched players with privileged access. Governance reforms should mitigate incumbent influence and control.

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

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

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

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

FERC could finally do what it promised and investigate IOU filing rights.⁴⁴⁰ To bolster RTO independence, FERC could expand filing rights over regionally

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

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

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

436. See sources cited at note 144.

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

438. *Id.* at n.34.

439. *Id.*

440. Proceedings about FERC's rescissions of so-called "rights of first refusal" that granted IOUs exclusive transmission development privileges are instructive. See *SPP, et al.*, 144 FERC ¶ 61,059 at P 133 (2013), *aff'd*, *Oklahoma Gas and Elec. Co. v. FERC*, 827 F.3d 75, 80 (D.C. Cir. 2016); *MISO*, 142 FERC ¶ 61,215 at P 183

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

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

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

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

This new “innovation sector” could be part of a broader reexamination of RTO member/stakeholder sectors. In its 2002 Standard Market Design proposal, FERC recognized that “lack of adequate representation” in stakeholder processes

(2013), *aff’d*, MISO Transmission Owners v. FERC, 819 F.3d 329, 335 (7th Cir. 2016); *ISO-NE*, 143 FERC ¶ 61,150 at P 169 (2013), *aff’d*, Emera Maine v. FERC, 854 F.3d 662 (D.C. Cir. 2017); *PJM Interconnection, et al.*, 142 FERC ¶ 61,214 at P 189 (2013), *aff’d*, Am. Transmission Sys. Inc., v. FERC, 2016 WL 3615443 (D.C. Cir. 2016, unpublished) (dismissed for lack of jurisdiction).

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

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

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

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

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

“may hinder development of alternative energy resources” that are “contrary to the business interests of certain market participants.”⁴⁴⁶ But FERC never finalized that proposal or ordered reforms to RTO sectors. Instead, in three separate orders issued over twelve years, FERC ordered RTOs to adopt new rules that facilitate participation of particular alternative energy resources.⁴⁴⁷ Rather than setting and enforcing additional technology-specific rules, an ongoing task that may overwhelm FERC’s capacity and capabilities, FERC should focus on fostering institutions that will prioritize innovation.

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

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

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

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

447. *Supra* note 10.

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

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

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

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

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

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

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

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

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

If Congress takes up power sector governance, filing authority should be at the top of its agenda. IOU filing authority is a relic of century-old utility laws

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

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

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

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

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

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

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

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

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

VII. CONCLUSION

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

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

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

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