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RETHINKING GRID GOVERNANCE FOR THE CLIMATE CHANGE ERA

by Shelley Welton

Shelley Welton is the Presidential Distinguished Professor of Law and Energy Policy at University of Pennsylvania-Carey School of Law and the Kleinman Center for Energy Policy.

I. Introduction

One central but under-scrutinized way that fossil fuel companies impede the clean energy transition is by essentially running the United States' electricity grid, writing its rules to favor their own private interests. In most of the country,¹ the electricity grid is managed by Regional Transmission Organizations (RTOs).² RTOs are 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—under broad regulatory authority.³ RTOs are able to adopt positions against new clean energy technologies because their hybrid, quasi-governmental institutional structures allow incumbent industry members to dominate stakeholder processes. This Article contends that United States grid governance must be redesigned to accommodate a new era of regulatory priorities that include responding to climate change.

II. The Birth and Growth of RTOs

In 1999, to drive competition in the electricity industry and facilitate open access, the Federal Energy Regulatory Commission (FERC) pushed for all utilities to join

RTOs that would control the regional transmission grid, in place of utility-by-utility system management. However, the agency left the design details up to the industry.⁴ The Commission merely required that RTOs be (1) independent, (2) regional, and (3) responsible for the operation of the grid.⁵ In particular, FERC specified that RTOs must be given authority to design and administer their own regional tariffs, which would establish rules for regional transmission management.⁶

Although FERC hoped that all regions would form RTOs, FERC's various efforts to create a uniform model of grid governance were unsuccessful and ultimately abandoned. Accordingly, the United States is left with a hodge-podge system, where some portions of the country (notably, the Southeast and much of the West) maintain vertically integrated, regulated utility monopolies.⁷ Today, two-thirds of the country (by population) is under an RTO.⁸ In these regions, RTOs now have several important functions, including managing both the grid and regional electricity markets and planning for grid expansions. Several eastern RTOs have expanded their roles further by assuming control over "resource adequacy." In all of these areas, RTOs establish critical rules through a combination of membership voting and board oversight. FERC is supposed to ensure that all such rules create "just and reasonable" rates and practices.⁹

When FERC designed RTOs, it presumed that it would be able to adequately police their conduct; however, judicial and legislative developments have complicated FERC's scheme of private grid governance. In particular, a pair of

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1. This Article does not discuss regions of the country that did not join RTOs—the Southeast and much of the West. A companion work-in-progress, *The States That Opted Out*, examines the status of electricity governance in those regions.
2. Also called "Independent System Operators" (ISOs) in some regions. In this Article, except where relevant for purposes of historical accuracy, I intend RTOs to include ISOs, as "[t]he difference between an ISO and RTO is largely semantic these days." DEVIN HARTMAN, R STREET POL'Y STUDY NO. 67: WHOLESALE ELECTRICITY MARKETS IN THE TECHNOLOGICAL AGE 3 n.5 (2016).
3. This description is overgeneralized. See the full article by Shelley Welton, Appendix A (Feb. 2021), at <https://www.californialawreview.org/print/rethinking-grid-governance>, for more on specific RTO structures. Shelley Welton, *Rethinking Grid Governance for the Climate Change Era*, 109 CAL. L. REV. 209 (2021).

4. See FERC Order No. 2000, Regional Transmission Organizations, 65 Fed. Reg. 810, 811, 813, 824 (issued Dec. 20, 1999) (codified at 18 C.F.R. pt. 35 (2019)) [hereinafter Order 2000].
5. *Id.* at 842. FERC clarified that, by "independent," it meant independent from "market participants." *Id.*
6. *Id.* at 858.
7. See generally William Boyd & Ann E. Carlson, *Accidents of Federalism: Ratemaking and Policy Innovation in Public Utility Law*, 63 UCLA L. REV. 810 (2016) (describing the three different models of state electricity regulation). Texas also has an RTO, which is not under federal jurisdiction. See *id.* at 855.
8. E4THE FUTURE, INC., REGIONAL ENERGY MARKETS: DO INCONSISTENT GOVERNANCE STRUCTURES IMPEDE U.S. MARKET SUCCESS? 3 (2016).
9. See 16 U.S.C. §824d(a) (2018).

circuit court opinions has circumscribed FERC's ability to manage the governance of these regional entities. In *CAISO v. FERC*, the U.S. Court of Appeals for the District of Columbia (D.C.) Circuit held that FERC has "no authority" to "order a public utility subject to its regulation to replace its governing board."¹⁰ And, in *NRG v. FERC*, the same circuit held that the Commission exceeded its legal authority by requiring the RTO to adopt more than "minor" modifications to its proposal to secure FERC approval.¹¹ The combined effect of *CAISO* and *NRG* is to provide FERC fewer tools to reform internal RTO governance at the same time that it must wholly accept or reject whatever proposals come out of RTO governance arrangements.

These doctrinal limitations on FERC's RTO oversight have been compounded by legislative developments that have stimulated utility mergers, which concentrate economic and political power in fewer companies.¹² There is a certain irony in the fact that deregulatory theories led FERC to turn increasingly to competition as the basis for ensuring "just and reasonable" rates, while also leading the U.S. Congress to lift prohibitions on consolidation that had ensured robust competition in the industry over the previous 80 years. This newly concentrated power complicates theories of RTO governance, which rely upon internal industry checks to legitimate RTO decisionmaking.

III. RTOs Confront the Climate Imperative

The electricity sector has been appropriately called the "linchpin of efforts to reduce greenhouse gas (GHG) emissions."¹³ Thus, it is only logical that both state and federal lawmakers and regulators have increasingly focused on decarbonizing the sector in the last several decades. Consequently, RTOs have faced an energy law landscape that has embraced a rapidly shifting set of priorities. But rather than embrace this challenge, RTO governance has too often resisted these changed priorities, especially when they threaten incumbent members of the energy sector.

As grid managers, RTOs play a key role in enabling sectoral transformation. This role is complicated, however, by the fact that neither FERC nor RTOs have an independent mandate to decarbonize.¹⁴ Moreover, the Federal Power

Act explicitly leaves decisions over the electric generation mix to the states.¹⁵ For this reason, those within RTOs often describe them as policytakers, not policymakers.¹⁶

However, reality belies these claims, as RTO rules necessarily dictate what resources can participate in regional markets and under what terms. In the last two decades, there has been a profusion of state climate policy: 29 states have required utilities to secure an increasing percentage of their electricity from renewable sources¹⁷; every state has put in place laws to encourage efficiency and conservation¹⁸; and many states have gone further to require rapid and thorough sectoral transformation.¹⁹ As a result of these policies, RTOs need to reform their markets and dispatch to accommodate the expected influx of renewable energy and support decreased reliance on natural gas in the electricity sector. The expansion of renewable energy will also require construction of *a lot* more transmission infrastructure to connect remote solar and wind resources to population centers.²⁰ In their role as regional transmission planning coordinators, RTOs' willingness to enable maximum transmission expansion will also help determine the viability of a renewables-heavy electricity sector. However, RTOs have not always been up to the challenge.

In particular, RTOs have been inveterate stallers when it comes to integrating new resources that would improve their markets but threaten incumbents' bottom lines. RTO heel-dragging causes years, if not decades, of delay in critical market improvements, costing billions of dollars and causing significant GHG emissions.²¹ RTOs' dil-

L. REV. 1783, 1786 (2016) (urging FERC to consider adopting a "carbon adder" to market pricing). For purposes of this Article, I accept FERC's movement in this direction as unlikely. See Rich Glick & Matthew Christiansen, *FERC and Climate Change*, 40 ENERGY L.J. 1, 5, 30-33 (2019) (explaining FERC's role as a fuel-neutral regulator that is not in charge of setting priorities for the generation mix, but can and should accommodate state climate priorities).

15. See 16 U.S.C. §824(b)(1) (2018).

16. See 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, 229 (2016) (quoting RTO staffer explaining: "We are a taker of policy not a maker of policy . . . We don't create policy. We attempt to interpret policy as handed to us."). See also Order on Tariff Filing, ISO New England, Inc., 162 FERC ¶¶ 61205, 61226 (2018) (FERC insisting that the agency remains resource-neutral); *Our Three Critical Roles*, ISO NEW ENGLAND, <https://www.iso-ne.com/about/what-we-do/three-roles> [<https://perma.cc/XB2A-UWVV>].

17. N.C. CLEAN ENERGY TECH. CTR., U.S. DEP'T OF ENERGY, RENEWABLE PORTFOLIO STANDARD POLICIES (2018), <http://nccleanenergy.com/wp-content/uploads/2018/10/Renewable-Portfolio-Standards-2018.pdf> [<https://perma.cc/S4W7-U3YV>].

18. See *Database of State Incentives for Renewables & Efficiency*, N.C. CLEAN ENERGY TECH. CTR., <https://www.dsireusa.org> [<https://perma.cc/CM9G-CQ2S>].

19. See Jim Rossi, *Carbon Taxation by Regulation*, 102 MINN. L. REV. 277, 301-12 (2017). See also *Database of State Incentives for Renewables & Efficiency*, *supra* note 18.

20. See Jenkins et al., *supra* note 13, at 2506; Alexandra B. Klass, *Expanding the U.S. Electric Transmission and Distribution Grid to Meet Deep Decarbonization Goals*, 47 ELR 10749, 10751 (Sept. 2017); Alexander E. MacDonald et al., *Future Cost-Competitive Electricity Systems and Their Impact on US CO₂ Emissions*, 6 NATURE CLIMATE CHANGE 526, 526 (2016).

21. See STEVE DAHLKE & MATT PROROK, GREAT PLAINS INST., CONSUMER SAVINGS, PRICE, AND EMISSIONS IMPACTS OF INCREASING DEMAND RESPONSE IN THE MIDCONTINENT ELECTRICITY MARKET 1 (2018) (finding savings potential from untapped demand response in MISO alone of up to \$18.5 million per year); SAM NEWELL ET AL., BRATTLE GRP., OPPORTUNITIES TO

10. Cal. Indep. Sys. Operator v. FERC, 372 F.3d 395, 398 (D.C. Cir. 2004).

11. NRG Power Mktg. v. FERC, 862 F.3d 108, 110, 114 (D.C. Cir. 2017).

12. See, e.g., Raymond S. Hartman, *The Efficiency Effects of Electric Utility Mergers: Lessons From Statistical Cost Analysis*, 17 ENERGY L.J. 425, 427-31 (1996) (discussing historical utility mergers that increased the size of generating units "to capture increasing returns to scale, thereby lowering average generation costs," and developing factors that may allow more modern utilities to capitalize upon economies of scale). But see Scott Hempling, *Inconsistent With the Public Interest: FERC's Three Decades of Deference to Electricity Consolidation*, 39 ENERGY L.J. 233, 234, 238 (2018) (pointing out that mergers can also create "diseconomies of scale due to non-integrated operations").

13. Jesse D. Jenkins et al., *Getting to Zero Carbon Emissions in the Electric Power Sector*, 2 JOULE 2498, 2498 (2018).

14. Most commentators accept that decarbonization is not within FERC's charge to maintain "just and reasonable" rates—although some argue that FERC could justifiably incorporate this goal. See, e.g., Christopher J. Berman & James T.B. Tripp, *Toward Greener FERC Regulation of the Power Industry*, 38 HARV. ENV'T L. REV. 275, 278 (2014) (urging FERC to incorporate environmental considerations into market design); Joel B. Eisen, *FERC's Expansive Authority to Transform the Electric Grid*, 49 U.C. DAVIS

atory tactics have manifested in several technically dense controversies over demand response, energy storage, the integration of distributed energy resources (DER) into markets, and transmission policy. In each instance, FERC has had to force RTOs' hands with prescriptive policy measures that face resistance from incumbent industry members and often result in legal challenges. As FERC has explained, the reason that markets have discriminated against demand response, storage, and DER is that barriers "can emerge when the rules governing participation in those markets are designed for traditional resources and in effect limit the services that emerging technologies can provide."²² This is, however, the predictable result of a member-driven process for raising and vetting issues, where incumbents have both reason and power to block the entry of new competitor technologies.

At the same time, when it comes to renewable energy, certain RTOs have been aggressive and misguided. Natural gas generators in particular worry that the entry of substantial renewable resources into the market might lower market prices enough to drive fossil fuel companies out of business. Consequently, two RTOs have pushed for reforms that limit the ability of "state-supported resources" to participate in their markets.²³ Curiously, though, these RTOs define "state support" only to include certain state-driven policies that tend to promote clean energy.²⁴ The result of these reforms—still in place in one market, repu-

diated in the other—has been a slowing of the transition to clean energy.

IV. Privatization as the Problem: Diagnosing RTOs' Flaws

FERC hoped that RTOs would prove better stewards of the electricity system than atomized monopoly utilities. In many ways, this hope is borne out: researchers have documented many benefits that come with grid regionalization. However, the regional governance model approved by FERC has proven less than ideal in the face of the major energy transition demanded by climate change. Much of the recent research on RTOs suggests that their internal processes (outside California, which uses an administrative-agency-based model) excel at producing reforms that serve incumbents' business interests but struggle to effectuate reforms that enhance competition or shrink the demand for electricity.

And, states are largely powerless within RTO governance processes to do anything about the fact that RTOs are undermining their lawful state policies, especially in multi-state RTOs.

Consequently, FERC should abandon hope in RTOs' membership-club democracy as a sound method of grid management. Although reforms to RTOs' internal governance mechanisms might ease the challenges, the core of the problem is a lack of public control. This lack of control manifests in both an inversion of the proper hierarchy between RTOs' responsibilities and states' legitimate policy priorities, and an oversight deficit between RTOs and their primary government regulator, FERC.

V. Ways Forward: A Reform Agenda

Although the challenge of climate change is pushing state and federal legislators and regulators to adopt policies and priorities that privilege clean energy, the U.S. electricity grid is governed predominantly by behemoth, incumbent industry members with little interest in facilitating these changes. The goal for reformers should not be to abandon the regional format and unwind back to a time when states had predominant control. Both technology and policy prerogatives have usurped this possibility. Not only does today's interconnected grid make regional management economically and technically desirable, but the growing policy mandate to transition to clean energy demands even greater regional cooperation on climate. Therefore, to build the clean energy economy needed for the 21st century, RTO governance reforms are imperative to bring regional grid management in line with democratic demands. There are four pathways—some mutually reinforcing—to better grid governance: (1) pare back RTO authority; (2) increase regulatory oversight; (3) better police sectoral corporate power; and (4) consider a public option.

MORE EFFICIENTLY MEET SEASONAL CAPACITY NEEDS IN PJM 2 (2018) (estimating that better accommodating seasonal resources could save consumers hundreds of millions of dollars each year); JOHANNES P. PFEIFENBERGER ET AL., BRATTLE GRP., COST SAVINGS OFFERED BY COMPETITION IN ELECTRIC TRANSMISSION: EXPERIENCE TO DATE AND THE POTENTIAL FOR ADDITIONAL CUSTOMER VALUE 1-2 (2019) (estimating that more competitive transmission processes could create "customer value" of "approximately \$8 billion over the course of five years"); Iulia Gheorghiu, *PJM Capacity Market Plan to Increase Costs \$8.4B, Market Monitor Estimates*, UTIL. DIVE (Sept. 18, 2019), <https://www.utilitydive.com/news/PJM-capacity-market-ferc-costs-8billion-risks-state-subsidies-clean-energy-nuclear-mopr/563152> [<https://perma.cc/V26Z-PTQK>].

22. FERC Order No. 841, *Electric Storage Participation in Markets Operated by Regional Transmission Organizations and Independent System Operators*, 83 Fed. Reg. 9580, 9582 (Feb. 15, 2018) (codified at 18 C.F.R. pt. 35 (2019)) [hereinafter Order 841].

23. These regions will now subject state-supported resources to a "minimum offer price rule" that requires them to bid into capacity markets at levels less likely to clear and receive payment. See Order on Tariff Filing, ISO New England, Inc., 162 FERC ¶ 61205, para. 2-3 (Mar. 9, 2018); Order Establishing Just and Reasonable Rate, *Calpine Corp. v. PJM Interconnection, L.L.C.*, 169 FERC ¶ 61239, para. 2 (Dec. 19, 2019). Because, however, state law requires these resources to be constructed to meet renewable procurement mandates, states will build them anyway—but they will not count toward the regions' installed capacity. For more detailed accounts, see Danny Cullenward & Shelley Welton, *The Quiet Undoing: How Regional Electricity Market Reforms Threaten State Clean Energy Goals*, 36 YALE J. REG. BULL. 106 (2018); Joshua C. Macey & Jackson Salovaara, *Rate Regulation Redux*, 168 U. PA. L. REV. 1181 (2020).

24. See *Calpine Corp. v. PJM Interconnection, L.L.C.*, 169 FERC ¶¶ 61239, 62998 (Comm'r Glick, dissenting) (accusing these reforms of specifically and arbitrarily targeting "state resource decisionmaking, and particularly state efforts to address the externalities of electricity generation"); *Calpine Corp. v. PJM Interconnection, order on reh'g and clarification*, 171 FERC ¶¶ 61034, 61235-36 (Apr. 16, 2020) (Comm'r Glick, dissenting) (cataloguing the "federal subsidies [that] have pervaded the energy sector for more than a century . . ." in support of fossil fuels, and which "remain pervasive in PJM").

A. Pare Them Back

FERC did not expect RTOs to have the range of functions and functional policymaking authority that they do today. The accretion of RTO authority over the types of resources built and brought to markets has been gradual and complex—but is not a necessary component of successful grid management, as demonstrated through several regions that maintain more state voice and control. Consequently, one potential reform is to return RTOs to a more basic set of functions.

Most notably, there is rising support for the idea of eliminating mandatory capacity markets from eastern RTOs.²⁵ FERC should be able to take this step unilaterally by declaring that the current mandatory capacity market constructs are “unjust and unreasonable” under Federal Power Act §206 and ordering regions to find another solution to resource adequacy that better accommodates states.²⁶ One model worth considering is that of California, where the California Public Utilities Commission and the California ISO (CAISO) share responsibility over resource adequacy according to their comparative advantages: CAISO is in charge of the technical elements of forecasting resource adequacy requirements, while the state commission oversees planning for how to meet these requirements.²⁷

Restructuring control over resource adequacy would go a long way toward remedying the mischief that pro-fossil companies have caused in several RTOs.²⁸ Nevertheless, this move alone will not solve all governance challenges. Already, there are controversies over how RTOs determine “price formation” in the markets under their control, as well as the rules surrounding requirements for new resources to connect to the grid. Ultimately, the issue comes down to *who writes these rules*. To ensure that pricing and rules in these markets remain just and reasonable under changing conditions, FERC may need to take a heavier hand in dictating what fair treatment looks like.²⁹

B. Increase Public Oversight and Control

A second set of reforms involves accepting RTOs’ aggrandized modern responsibilities and enhancing public oversight and control of these organizations commensurately.

RTO reform need not go as far as the California model—in which the ISO functions more like a state agency than a private club—to create a more robust role for states. The Midwest ISO, for example, has incorporated state regulatory authorities as the most powerful weighted voting bloc within its Membership Committee—thus building in a more direct state oversight role of its markets.³⁰ FERC might consider forcing other regions to reform their governance structures to provide a similarly strong role for state interests.³¹ A stronger reform would be to give regional state committees a veto-point over RTO decisionmaking at a level superior to regular membership.

There are, of course, risks to giving states too much control over RTOs, especially given the polarization among states regarding their attitudes toward clean energy.³² In regions where many states oppose clean energy, a stronger state oversight presence might not prove an antidote to challenges of incumbent favoritism within the RTO. But this risk is baked into energy law: As the Federal Power Act makes clear, “[t]he states, not the Commission, are the entities responsible for shaping the generation mix.”³³

If FERC remains wary of so fully involving states in regional market oversight, it could pursue more piecemeal changes: Recognizing the traditional state role over resource adequacy, FERC could give regional state committees the right to approve or reject by supermajority RTOs’ proposed changes in resource adequacy rules.³⁴ Or, perhaps FERC could give regional state committees the right to file a competing proposal when they disagree with an RTO’s §205 filing—the same right that is presently afforded to New England’s stakeholder governance group.³⁵

And although circuit courts have limited the matters FERC can regulate and the extent to which the agency can amend RTO proposals, FERC still has tools, however blunted they may be. The agency could, for example, become more muscular in its use of §206 findings that regional tariffs are “unjust and unreasonable.” Or it could use §206 findings as the basis of a larger proceeding devoted to reconsidering the RTO format.³⁶

25. David Roberts, *This Federal Agency Is Quietly, Profoundly Shaping Climate Policy*, Vox (May 22, 2019, 10:00 AM), <https://www.vox.com/energy-and-environment/2019/5/22/18631994/climate-change-renewable-energy-ferc> [<https://web.archive.org/save/https://www.vox.com/energy-and-environment/2019/5/22/18631994/climate-change-renewable-energy-ferc>] (quoting Commissioner Glick expressing “serious reservations about mandatory capacity markets”). See also Jennifer Chen & Gabrielle Murnan, *State Participation in Resource Adequacy Decisions in Multistate Regional Transmission Organizations*, DUKE U. NICHOLAS INST. ENV’T POL’Y SOLS. (2019) (advocating for greater state authority in resource adequacy).

26. See 16 U.S.C. §824e(e)(4)(a) (2018).

27. See CAL. PUB. UTIL. COMM’N, *Resource Adequacy*, <https://www.cpuc.ca.gov/ra> [<https://perma.cc/8B9X-YH45>].

28. See Jacob Mays et al., *Asymmetric Risks and Fuel Neutrality in Electricity Capacity Markets*, 4 NATURE ENERGY 948, 953 (2019) (finding that capacity markets are inherently biased against low-carbon resources, which tend to have high fixed costs and near-zero operating costs).

29. See MARK JAMES ET AL., R ST. POL’Y STUDY NO. 112: HOW THE RTO STAKEHOLDER PROCESS AFFECTS MARKET EFFICIENCY, Oct. 18, 2017 (suggesting that FERC should be less deferential to proposals coming from RTOs).

30. See Chen & Murnan, *supra* note 25, at 10 (describing MISO’s “relatively collaborative culture” between the ISO and the states); Welton, Appendix A, *supra* note 3 (showing that state authorities receive a 16% weighted vote in MISO).

31. See Order Rejecting Revisions, New England Power Pool Participants Comm., 166 FERC ¶¶ 61062, 61276 (Jan. 29, 2019).

32. See generally LEAH CARDAMORE STOKES, *SHORT CIRCUITING POLICY: INTEREST GROUPS AND THE BATTLE OVER CLEAN ENERGY AND CLIMATE POLICY IN THE AMERICAN STATES* (2020) (showing how fossil-fuel-allied interest groups dominate political and regulatory processes in Texas, Kansas, Arizona, and Ohio).

33. Order on Rehearing and Clarification, *Calpine Corp. v. PJM Interconnection*, 171 FERC ¶ 61035 (Comm’r Glick, dissenting, para. 5) (Apr. 16, 2020).

34. ³⁴Given that SPP already allows its regional state committee control over resource adequacy, this proposal seems legally plausible. See Chen & Murnan, *supra* note 25, at 15-16 (making this point). See also Order Accepting Revisions to Transmission Owners Agreement, Midwest Indep. Transmission Sys. Operator, Inc. & the Miso Transmission Owners, 143 FERC ¶¶ 61165, 62210 (May 23, 2013).

35. See Welton, Appendix A, *supra* note 3, for more on ISO-NE “jump ball” filings.

36. See William Boyd, *Ways of Price Making and the Challenge of Market Governance in U.S. Energy Law*, 105 MINN. L. REV. 739, 748 (2020) (arguing that FERC has unused authority to regulate price formation in RTOs).

More ambitiously, Congress could create a special category of review for RTO tariff filings within the Federal Power Act, providing FERC with the ability to amend portions of RTO filings and to reject plausible but inferior solutions. These changes would recalibrate FERC's authority over RTOs to align it with the authority of other federal agencies engaged in policymaking, which operate under the benefit of *Chevron* deference to preferred agency solutions.³⁷

C. Improve the Possibilities for Good Internal Governance

Reformers might also consider cabining the creeping dominance of heavyweight corporate entities in the electricity sector, by limiting the ability of large holding companies to dominate RTO governance through their opaque voting power across membership sectors. To tackle this challenge, FERC could increase scrutiny of corporate mergers and their impact on electricity governance by drawing upon its statutory charge to ensure that proposed mergers are "consistent with the public interest."³⁸ As utility expert Scott Hempling has suggested, perhaps "public interest" review should include not only a market power screen, but a more searching inquiry into whether each additional merger might harm the overall structural competition of the electricity sector.³⁹ Alternatively, FERC might place conditions on mergers that limit RTO stakeholder participation when the merger could create opportunities for self-interested voting.⁴⁰

For a more robust fix, Congress might revisit its 2005 decision to repeal the Public Utilities Holding Company Act (PUHCA), which eliminated New Deal-era limitations on the size and scope of utility holding companies. Although utilities suggest that PUHCA was a vestigial policy that limited their dynamism and economies of scale, others question whether consolidation has done the industry more harm than good.⁴¹

Alternatively, if Congress and the executive branch prove unwilling, the courts may present an increasingly plausible avenue for reigning in utility power. To date, electricity corporations have largely been immunized from antitrust challenges under the theory that FERC's review of utilities' filed

rates obviates the need for judicial antitrust scrutiny.⁴² However, in light of the significant changes in the industry, scholars have questioned whether courts should continue to allow the filed rate doctrine to stand as a bar to claims of industry collusion,⁴³ and the U.S. Supreme Court recently reaffirmed the applicability of state antitrust laws to FERC-regulated natural gas pipelines.⁴⁴ Although there is no rock-solid case under current precedent to assert that RTOs' self-interested rulemakings create either an antitrust or due process challenge, continued display of an incumbency bias could push courts toward accepting a theory crafted along these lines.

D. Explore a Public Option

There is, finally, a more radical option: Management of the grid could be made more thoroughly public. Several European countries have publicly owned grids.⁴⁵ Alternatively, California provides a model of political control without ownership, and has proven that more direct political control can align regulatory priorities and grid governance. How FERC might effectuate a transition to public ownership or control is a complex question. Perhaps a bold FERC, looking at the necessary pace and scale of decarbonization, might justify ordering significant RTO governance reform or transmission divestment to a public entity as a necessary precondition for "just and reasonable" rates in the era of climate change.⁴⁶ It is, however, unclear whether the federal courts would be willing to sanction such profound restructuring under long-standing statutory authority.⁴⁷ Nevertheless, the option at least merits discussion, so as to explore the full range of potential solutions rather than anchoring the reform conversation in the land of small tweaks to the privatized modern system.

VI. Conclusion

One way to understand RTOs is as sectoral symptoms of troubling trends toward privatization and agglomeration that pervade the modern U.S. economy and the institutions ostensibly designed to shape and control it. Electricity law, now hollowed by two decades of deregulatory experimentation, needs a reinvigorated focus on the *public* component of public utility law. Either the sector will embrace the existential challenge of climate change, or else it will take us all down with it.

37. See Kent Barnett & Christopher J. Walker, *Chevron Step Two's Domain*, 93 NOTRE DAME L. REV. 1441, 1462 (2018) (finding agency win rates under *Chevron* steps one and two of 77.4% and 93.8%, respectively).

38. 16 U.S.C. §824b(a)(4) (2018). The agency's current practice is governed by a Merger Policy Statement, which FERC could amend. See FERC Order No. 592, Inquiry Concerning the Commission's Merger Policy Under the Federal Power Act; Policy Statement, 61 Fed. Reg. 68595-01, 68598 (Dec. 18, 1996) (codified at 18 C.F.R. pt. 2 (2019)) [hereinafter Order 592]. Indeed, FERC has recently contemplated amendments to this policy. See Notice of Inquiry, Modifications to Comm'n Requirements for Rev. of Transactions Under Section 203 of the Fed. Power Act and Mkt-Based Rate Applications Under Section 205 of the Fed. Power Act, FERC Docket No. RM16-21-000, 156 FERC ¶ 61214 (Sept. 22, 2016).

39. See Hempling, *supra* note 12, at 268-72. See also Order 592, *supra* note 38, at 68606 (listing "effects on competition" as one of three guiding criteria).

40. See 16 U.S.C. §824b(b) (2018) (granting FERC the authority to place "necessary or appropriate" conditions on mergers).

41. See Hempling, *supra* note 12, at 238, 279 (explaining how diversification poses risks in a landscape with regulated and unregulated markets).

42. See Jim Rossi, *Lowering the Filed Tariff Shield: Judicial Enforcement for a Deregulatory Era*, 56 VAND. L. REV. 1591, 1593-94 (2003).

43. See *id.* at 1592, 1597; Sandeep Vaheesan, *Market Power in Power Markets: The Filed-Rate Doctrine and Competition in Electricity*, 46 U. MICH. J.L. REFORM 921, 921 (2013).

44. See *Oneok, Inc. v. Learjet, Inc.*, 575 U.S. 373, 376 (2015).

45. See Jean-Michel Glachant & Dominique Finon, *A Competitive Fringe in the Shadow of a State Owned Incumbent: The Case of France*, 26 ENERGY J. 181, 183-85 (2005); Hogne Leroy Sataoën et al., *Towards a Sustainable Grid Development Regime? A Comparison of British, Norwegian, and Swedish Grid Development*, 9 ENERGY RSCH. & SOC. SCI. 178, 181-82 (2015).

46. See 16 U.S.C. §824d (2018).

47. See *Util. Air Reg. Grp. v. EPA*, 573 U.S. 302, 324 (2014) (invalidating EPA's "Tailoring Rule" on grounds of statutory overreach); Jody Freeman & David B. Spence, *Old Statutes, New Problems*, 163 U. PA. L. REV. 1, 3 (2014).