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Rebuilding Grid Governance

Joel B. Eisen* & Heather E. Payne**

As climate change sharpens the focus on our electricity systems, there is widespread agreement that the institutions that govern our electric grid must change to realize a clean energy future in the timescale necessary. Scholars are actively debating how grid governance needs to change, but in this Article we demonstrate that current proposals are insufficient because they do not contemplate “rebuilding.” This Article defines “rebuilding” as ending entities tasked with grid governance and creating new ones to take their place. We propose what no one else has: an overarching framework for rebuilding any grid governance institutions.

This Article discusses when rebuilding is necessary, arguing that incrementalism has slowed progress toward more clean energy and that much bolder solutions are imperative. Policy proposals to date have been accommodative, tending to lead to slower progress toward clean energy goals than necessary. A further challenge is that utility dominance in regulatory conversations has led to inefficient and unjust outcomes, and would not be addressed sufficiently by current reform proposals. Addressing these challenges, this Article identifies three criteria for deciding when specific grid governance institutions should end, terming these administrative dysfunction (continued dithering over a subject without making sufficient progress), utility indifference to the common good, and incapacity of the current governance structure to achieve positive outcomes.

This Article concludes that rebuilding is essential to ensure that grid governance will effectively mitigate climate change and address the shortcomings of our current grid governance structures. To guide the rebuilding of grid governance, this Article details three overriding principles for new entities, which

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are: resource agnosticism, broad-based participation, and a lack of self-centricity. This Article applies these principles to a specific setting – the “Minimum Offer Price Rule” prevalent in wholesale electricity markets that hampers clean energy development – and concludes that regional transmission organizations should not continue to disfavor clean energy in their markets.

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The utility sector has the wealth and raw political power, augmented from time to time by criminal enterprise, to delay [change] for decades at enormous cost to the public and the environment. The only way to stop this outcome is rewiring the utility business model, down to the studs, and the governance structures and norms of America’s public utility commissions.¹

It’s the classic problem of regulatory capture. There’s a huge governance problem at all the regional independent system operators [ISOs] and regional transmission organizations [RTOs], which is that their membership is a function of their market participants. So wherever you live, think of the big utilities in your state and the big transmission companies: They’re the members of those organizations.²

INTRODUCTION

The growing literature advocating for legal change to promote clean energy on the electric grid³ consistently confronts a harsh reality. Progress is slowed at choke points in a fragmented regulatory system, and governance institutions are often not up to the task. By “governance institutions,” we mean regulatory bodies, including the Federal Energy Regulatory Commission (FERC) and state public utility commissions (PUCs), non-public entities such

1. Grant Smith, *Energy Equity: Reforming Utilities’ Business Plans by Rebalancing Ratepayers’ Financial Risks*, UTIL. DIVE (Sept. 7, 2021), <https://www.utilitydive.com/news/energy-equity-reforming-utilities-business-plans-by-rebalancing-ratepayer-1/606097/>.

2. David Roberts, *Rep. Sean Casten on Hot FERC Summer and How to Prepare the US Grid for Rapid Decarbonization*, CANARY MEDIA (Aug. 18, 2021) (alteration in original) (quoting U.S. Representative Sean Casten (D-IL)), <https://www.canarymedia.com/articles/policy-regulation/rep-sean-casten-on-hot-ferc-summer-and-how-to-prepare-our-electricity-grid-for-climate-change>.

3. See *infra* notes 6–13 and accompanying text. The authors have been active contributors to this literature, individually and together with prominent energy law scholars.

as regional grid operators,⁴ and the entities they oversee and administer, such as the wholesale electricity markets. Many grid actors and scholars have proposed responsible solutions to facilitate a transition to clean energy. These proposed solutions would operate within the current system. In this Article, we advance another option that should be considered at the same time: ending some governance institutions, and building some anew where that is warranted. We term this “rebuilding.”

“Rebuilding” means “to build something again that has been damaged or destroyed[.]”⁵ We propose a three-part test to explain when a grid institution or relationship between entities is “damaged,” and when starting over is necessary. This can take any of three different forms: eliminating an entire regulatory entity (for example, an RTO or PUC); removing a specific sub-market or program that a regulator oversees (for example, a wholesale electricity market) while otherwise leaving the regulated entity’s structure intact; or comprehensively redefining the connection between the regulator and the entities that it regulates (for example, ending cost-of-service regulation). We propose another test for creating the resulting new or redefined entity.

Surprisingly, no one has suggested such comprehensive changes to grid governance. Scholars have written superbly about the typology of energy governance,⁶ the divergence between pursuing reliability and adding more clean energy to the grid,⁷ the

4. The regional grid operators are the Independent System Operators (ISOs) and Regional Transmission Organizations (RTOs), all of which are private, nonprofit institutions responsible for coordinating transmission networks within regions and administering wholesale electricity markets. *See infra* Part I. An example of another nongovernmental body is the North American Electric Reliability Corporation (NERC), which has a central role in overseeing the electric grid’s overall reliability. *About NERC*, N. AM. ELEC. RELIABILITY CORP., <https://www.nerc.com/AboutNERC/Pages/default.aspx> (last visited Mar. 6, 2023).

5. *Rebuild*, CAMBRIDGE ENGLISH DICTIONARY (2021).

6. *See, e.g.*, Alexandra Klass, Josua Macey, Shelley Welton & Hannah Wiseman, *Grid Reliability Through Clean Energy*, 74 STAN. L. REV. 969 (2022); Shelley Welton, *Rethinking Grid Governance for the Climate Change Era*, 109 CAL. L. REV. 209 (2021) [hereinafter Welton, *Rethinking Grid Governance*]; Sharon B. Jacobs, *Agency Genesis and the Energy Transition*, 121 COLUM. L. REV. 835 (2021); Kyungjin Yoo & Seth Blumsack, *The Political Complexity of Regional Electricity Policy Formation*, 2018 COMPLEXITY 1 (2018); Hari M. Osofsky & Hannah J. Wiseman, *Hybrid Energy Governance*, 2014 U. ILL. L. REV. 1 (2014); Hari M. Osofsky & Hannah J. Wiseman, *Dynamic Energy Federalism*, 72 MD. L. REV. 773 (2013).

7. Klass et al., *supra* note 6; Amy L. Stein, *Regulating Reliability*, 54 HOUS. L. REV. 1191 (2017).

state-federal relationship in energy law,⁸ the need for more robust means of regional energy governance,⁹ the laws and policies needed to deploy more clean energy (and the constitutional challenges),¹⁰ the need for utility regulatory paradigms to change to address climate change,¹¹ and the need to retool grid governance to promote energy democracy and justice.¹² Yet these analyses

8. The literature on the relationship between FERC and the states has expanded considerably in recent years, following three Supreme Court decisions that attempted to clarify the situation. Matthew R. Christiansen & Joshua C. Macey, *Long Live the Federal Power Act's Bright Line*, 134 HARV. L. REV. 1360 (2021); Jim Rossi, *Energy Federalism's Aim*, 134 HARV. L. REV. F. 228 (2021) (responding to Christiansen and Macey); Joel B. Eisen, *The New (Clear?) Electricity Federalism: Federal Preemption of States' "Zero Emissions Credit" Programs*, 45 ECOLOGY L. CURRENTS 149 (2018) [hereinafter Eisen, *The New (Clear?) Electricity Federalism*]; Ari Peskoe, *Easing Jurisdictional Tensions by Integrating Public Policy in Wholesale Electricity Markets*, 38 ENERGY L.J. 1 (2017); Joel B. Eisen, *Dual Electricity Federalism Is Dead, but How Dead, and What Replaces It?*, 8 GEO. WASH. J. ENERGY & ENV'T L. 3 (2017); Joel B. Eisen, *FERC's Expansive Authority to Transform the Electric Grid*, 49 U.C. DAVIS L. REV. 1783 (2016) [hereinafter Eisen, *FERC's Expansive Authority*]; Jim Rossi, *The Brave New Path of Energy Federalism*, 95 TEX. L. REV. 399 (2016).

9. Danielle Stokes, *Renewable Energy Federalism*, 106 MINN. L. REV. 1757 (2022) (suggesting a regional approach to renewable energy facility siting); Hannah J. Wiseman & Hari M. Osofsky, *Regional Energy Governance and U.S. Carbon Emissions*, 43 ECOLOGY L.Q. 143 (2016); Alexandria B. Klass, *The Electric Grid at a Crossroads: A Regional Approach to Siting Transmission Lines*, 48 U.C. DAVIS L. REV. 1895 (2015); Hannah Wiseman, *Expanding Regional Renewable Governance*, 35 HARV. ENV'T L. REV. 477 (2011).

10. Of course, this literature is voluminous. Some representative examples include: Caroline Trum, *Energy Storage and the Future of the Electric Market*, 42 ENERGY L.J. 299 (2021); Alexandra B. Klass & Jim Rossi, *Reconstituting the Federalism Battle in Energy Transportation*, 41 HARV. ENV'T L. REV. 423 (2017) (clean energy use in transportation); Felix Mormann, *Constitutional Challenges and Regulatory Opportunities for State Climate Policy Innovation*, 41 HARV. ENV'T L. REV. 189 (2017) (suggesting a multipronged approach for states to insulate themselves from preemption challenges, relying on both feed-in tariffs and renewable energy credits); Joel B. Eisen, *Demand Response's Three Generations: Market Pathways and Challenges in the Modern Electric Grid*, 18 N.C. J.L. & TECH. 351 (2017) (hereinafter Eisen, *Demand Response's Three Generations*); Sharon B. Jacobs, *The Energy Prosumer*, 43 ECOLOGY L.Q. 519, 549–56 (2016); Amy L. Stein, *Reconsidering Regulatory Uncertainty: Making a Case for Energy Storage*, 41 FLA. ST. U. L. REV. 697 (2014); Uma Outka, *The Renewable Energy Footprint*, 30 STAN. ENV'T L. J. 241 (2011); Lincoln L. Davies, *Power Forward: The Argument for a National RPS*, 42 CONN. L. REV. 1339 (2010); Steven Ferrey, *Restructuring a Green Grid: Legal Challenges to Accommodate New Renewable Energy Infrastructure*, 39 ENV'T L. 977 (2009).

11. Heather Payne, *Unservice: Reconceptualizing the Utility Duty to Serve in Light of Climate Change*, 56 U. RICH. L. REV. 603 (2022) [hereinafter Payne, *Unservice*]; Heather Payne, *Private (Utility) Regulators*, 50 ENV'T L. 999 (2020) (proposing that PUCs should adopt tools used by private equity companies) [hereinafter Payne, *Private (Utility) Regulators*].

12. Shalanda H. Baker, *Anti-Resilience: A Roadmap for Transformational Justice Within the Energy System*, 54 HARV. C.R.-C.L. L. REV. 1 (2019); Felix Mormann, *Clean Energy Equity*, 2019 UTAH L. REV. 335 (2019); Shelley Welton & Joel Eisen, *Clean Energy Justice: Charting an*

invariably take place within the context of our current regulatory framework and distribution of grid governance institutions, as if they were fixed in amber. Scholars who propose new theories for grid governance are ably explaining what we have and how it should work better,¹³ but not how to reconstitute entities if necessary. We address this gap in the literature and introduce a new dimension to the analysis: deciding whether entities should end or begin anew.

It is time to contemplate more sweeping changes to promote the clean energy transition, and not settle for less. Until now, it has been all too convenient to make incremental progress. Entrenched interests (particularly utilities', but others' as well) oppose anything else. Utilities have easily stymied change while nominally appearing to be good actors by publicly supporting deployments of more clean energy or other changes to the current system. Their tactics are familiar. Utilities agree to hortatory goals, but then undercut progress or make it difficult to achieve.¹⁴ They cozy up to state legislators (sometimes in shady ways)¹⁵ and then use their

Emerging Agenda, 43 HARV. ENV'T L. REV. 307, 343–48 (2019); Shelley Welton, *Electricity Markets and the Social Project of Decarbonization*, 118 COLUM. L. REV. 1067 (2018). See also Joel B. Eisen, *COVID-19 and Energy Justice: Utility Bill Relief in Virginia*, 57 U. RICH. L. REV. 155 (2022) [hereinafter Eisen, *COVID-19 and Energy Justice*] (discussing an energy justice case study in Virginia).

13. *Infra* notes 137–144 and accompanying text (discussion of reforms proposed in Klass et al., *supra* note 6); Joshua C. Macey, *Zombie Energy Laws*, 73 VAND. L. REV. 1077 (2020).

14. The New England utility Eversource agreed to switch heating systems from gas to electricity and then privately attempted to undermine a state's proposed regulations. *A Leading U.S. Utility Stealthily Fights the Electrification of Heating Systems*, YALEENVIRONMENT360 (May 4, 2021), <https://e360.yale.edu/digest/a-leading-u-s-utility-stealthy-fights-the-electrification-of-heating-systems>. Similar bait-and-switch tactics are taking place in New York and Minnesota. Lee Harris, *The Council Implementing New York's Climate Law Is Stacked with Industry Executives*, THE AM. PROSPECT (July 6, 2021); Karlee Weinmann (@karleeweinmann), TWITTER (Dec. 9, 2021, 3:09 PM), <https://twitter.com/karleeweinmann/status/1469036507294048262> (recognizing that executives from Xcel and CenterPoint have been outwardly supportive but sit on the American Gas Association board, which aims to stop electrification).

15. *Utility Industry Contributions to Section 527 Political Organizations*, ENERGY & POL'Y INST., <https://www.energyandpolicy.org/utility-industry-contributions-political-organizations/> (last visited Mar. 6, 2023) (discussing political contributions); Craig Mauger (@CraigDMauger), TWITTER (Aug. 30, 2021, 7:48 AM), <https://twitter.com/CraigDMauger/status/1432309124885356550> (noting the \$55 million two Michigan utilities have spent in the last five years on "civics, politics, and related initiatives"); Elizabeth Ouzts, *As Duke Energy Promotes Controversial Legislation in N.C., Money Pours in and Rumors Fly*, ENERGY NEWS

goodwill to force through bills that benefit them and oppose those which do not.¹⁶ In recent years, some hide behind astroturfing groups that give utilities plausible deniability.¹⁷ They also deploy their national trade associations to argue against customer interests, which is especially pernicious because ratepayers pay the dues that fund this advocacy.¹⁸

Incremental changes to grid governance harm customers and the planet. Despite widespread acknowledgement of the need for change in how electricity is made and distributed, it is not happening at the scale that will be necessary to deal with a rapidly changing climate.¹⁹ Levels of atmospheric carbon are their highest in at least 800,000 years.²⁰ The Intergovernmental Panel on Climate Change (IPCC) has unequivocally linked those increases to human activities,²¹ and “[h]uman influence has warmed the climate at a

NETWORK (Aug. 13, 2021), <https://energynews.us/2021/08/13/as-duke-energy-promotes-controversial-legislation-in-n-c-money-pours-in-and-rumors-fly/>.

Utility political contributions inevitably produce scandals. In 2021, for example, the utility Florida Power and Light was accused of bankrolling phony candidates in Florida elections to ensure victories by candidates viewed as more favorable to its positions. Jason Garcia & Annie Martin, *Florida Power and Light Execs Worked Closely with Consultants Behind ‘Ghost’ Candidate Scheme, Records Reveal*, Orlando Sentinel, Dec. 2, 2021.

16. See, e.g., Jason Meisner & Ray Long, *ComEd Scheme to Influence Madigan Was Not Legal Lobbying – It Was Bribery, Prosecutors Say*, CHI. TRIB., Aug. 24, 2021; Heather Payne, *Electrifying Efficiency*, 40 STAN. ENV’T. L.J. 57 (2021) (discussing First Energy scandal).

17. Michael Isaac Stein, *The Energy Industry’s Secret Campaign to Get Us to Build More Power Plants*, THE NATION, May 14, 2019. For an example in one state, see Ivy Main, *What’s with the Scary Ads About Threats to Your Power Service?*, VA. MERCURY, June 2, 2021 (describing the misleading ads run by the utility-affiliated group Power for Tomorrow); *Power For Tomorrow*, ENERGY & POL’Y INST., <https://www.energyandpolicy.org/power-for-tomorrow/> (last visited Mar. 6, 2023).

18. ENERGY AND POL’Y INST., *PAYING FOR UTILITY POLITICS: HOW UTILITY RATEPAYERS ARE FORCED TO FUND THE EDISON ELECTRIC INSTITUTE AND OTHER POLITICAL ORGANIZATIONS* (2017). There is slight movement toward change here, in the form of some PUCs denying utilities’ requests to recover association dues. See, e.g., Catherine Morehouse, *Kentucky Regulators Deny Utility Request to Recover EEI Dues. A Similar Question Sits Before FERC*, UTIL. DIVE (July 2, 2021), <https://www.utilitydive.com/news/kentucky-regulators-deny-utility-request-to-recover-eei-dues-a-similar-que/602757/>.

19. Herman K. Trabish, *As Utilities Risk Missing Carbon Reduction Targets, Analysts Stress Need for Organizational Change*, UTIL. DIVE (July 1, 2021), <https://www.utilitydive.com/news/as-utilities-risk-missing-carbon-reduction-targets-analysts-stress-need-fo/601341/>.

20. RICHARD P. ALLAN, ET AL., INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2021: THE PHYSICAL SCIENCE BASIS, SUMMARY FOR POLICYMAKERS 8 (2021); Scripps Inst. of Oceanography, *The Keeling Curve Hits 415 PPM*, YOUTUBE (May 15, 2019), <https://www.youtube.com/watch?v=Z43FQCSg4Ow&t=4s>.

21. RICHARD P. ALLAN, ET AL., *supra* note 20, at 4.

rate that is unprecedented in at least the last 2000 years[.]”²² While impacts from emissions are already having a measurable and significant impact on our climate,²³ utilities are failing to take actions commensurate with the long-term harm their emissions are creating. They continue to operate fossil-fuel-fired, carbon-emitting generation facilities, plan to operate them far into the future, and aim to build even more.²⁴ Without more sweeping changes, carbon emissions would not be taken into account in any organized electricity market to determine either dispatch order or capacity payments, allowing polluting sources to externalize the costs of their emissions and providing inadequate market signals for those sources to retire.²⁵

Another reason to contemplate bold change is that there already are ongoing conversations about starting or ending grid governance institutions at the state and federal levels, without any comprehensive attention to how this might affect the entire grid. There is substantial discussion about creating wholesale energy markets or RTOs in the parts of the nation that do not have them.²⁶ Texas is redesigning its wholesale markets after the debacle following Winter Storm Uri.²⁷ To help address our persistent inability to plan for and build new transmission lines, FERC has proposed the potential creation of transmission monitors independent of the RTOs, and others believe we might need a new

22. *Id.* at 6.

23. *See id.* at 8.

24. *See, e.g., SRP Announces Plans to Expand Its Coolidge Generating Station*, AZ BIG MEDIA, Aug. 25, 2021 (utility Salt River Power expanding natural gas capacity by 820 megawatts); Jeff St. John, *Duke Energy Faces Challenges to Its Push for New Natural Gas Plants*, GREENTECH MEDIA, Mar. 4, 2021.

25. MATT BUTNER, BETHANY DAVIS NOLL, JUSTIN GUNDLACH, BURCIN UNEL & AVI ZEVIN, INST. FOR POL’Y INTEGRITY, CARBON PRICING IN WHOLESale ELECTRICITY MARKETS: AN ECONOMIC AND LEGAL GUIDE 5 (2020) (discussing various proposals).

26. *See infra* note 240 and accompanying text (discussing the formation of the Southeast Energy Exchange Market (SEEM) in fall 2021); Hudson Sangree, *Western Utilities to Explore Market Options*, RTO INSIDER (Oct. 5, 2021), <https://www.rtoinsider.com/articles/28798-western-utilities-to-explore-market-options> (discussions about creating a market in the West, with several quotes from observers about the need for a RTO in the West).

27. Dominic Anthony Walsh, *ERCOT Announces Electricity Market Redesign, Warns of More Energy Conservation Requests*, TEX. PUB. RADIO (July 22, 2021), <https://www.tpr.org/environment/2021-07-22/ercot-announces-electricity-market-redesign-warns-of-more-energy-conservation-requests>. *See infra* Part IV.B (discussing the failure of the Texas electricity market during Winter Storm Uri).

federal transmission agency.²⁸ New York established an “Office of Renewable Energy Siting” to streamline the permitting and approval process.²⁹ These are just a few ongoing discussions, none of which feature the holistic focus we bring to the endeavor.

We are dismayed at this persistent myopia. We need bolder change—the stakes are too high for incremental change or changes made without the full picture in sight. Rebuilding should always be considered in any discussion of modernizing the electric grid. In Part I, we explain why. We describe how policy proposals have been accommodative, leading to inefficiencies, and how actors settle for incremental progress in reforming grid institutions rather than thinking and acting boldly. We explain further in Part I that incrementalism is damaging to progress toward meeting climate change goals and bringing more clean energy onto the grid.

To that end, this Article defines two critical decisions that policymakers should make and proposes criteria that ought to govern those decisions. First, when is it time for rebuilding, that is, which entities must come and which must go, and why? We acknowledge that starting over is not always optimal. Thus, in Part II, we define three criteria for deciding when it is time for rebuilding: administrative dysfunction, utility indifference for the common good, and incapacity. Administrative dysfunction focuses on repeated and successive ineffective attempts to improve market performance, regulatory oversight, or a stakeholder governance process when these attempts have proven ineffective, requiring a series of measures to try to correct the lack of progress. Utility indifference focuses on governance structures and program implementation that enshrine incentives for utilities to overspend on capital infrastructure and earn high returns on that invested capital, reaping outsized profits from those investments and harming consumer welfare. Incapacity refers to situations where

28. Eric L. Christensen, *FERC Launches Major Initiative to Reform Transmission Policy*, NAT'L L. REV. (July 21, 2021), <https://www.natlawreview.com/article/ferc-launches-major-initiative-to-reform-transmission-policy> (discussing the independent monitor concept embodied in FERC's Advanced Notice of Proposed Rulemaking on transmission policy, *infra* note 48 and accompanying text); Peter Behr, *Create DOE Transmission Agency to Fight Climate Threat*, ENERGYWIRE (July 15, 2021), <https://www.eenews.net/articles/report-create-doe-transmission-agency-to-fight-climate-threat/>.

29. Robert Walton, *New York Becomes First State to Establish Renewables Siting Office in an Effort to Speed Up Deployment*, UTIL. DIVE (Apr. 7, 2020), <https://www.utilitydive.com/news/new-york-becomes-1st-state-to-establish-renewables-siting-office-in-an-effo/575591/>.

actors and regulators have shown themselves to be incapable of addressing pressing issues, the most obvious being utilities' failures to address climate change in their planning and building for the future. We conclude that the more of these are present, the more likely it is that rebuilding is necessary.

Second, when it is time for rebuilding, how should it be done, and by whom? In Part II, we explain that the need to rebuild is most obvious in the state and federal regulatory spheres, so we focus on change that can be accomplished there. We stress that once rebuilding is necessary, it cannot be done using current governance structures that are often skewed in favor of the status quo. We describe how regulators should create new mechanisms for deciding how an entity might end and then reemerge.³⁰

In Part III, we define three central principles for establishing new grid governance structures and for operating rebuilt entities. Our core governance principle is "resource agnosticism": resources of all sorts that supply electricity and reduce demand should be eligible and valued by their contribution to the grid, considering all environmental and climate values and not any grid actors' self-interest. We explain why it is an essential core principle for all governance structures, well beyond how it has featured in the grid to date. We also call for more broad-based participation in grid governance, both when the decision is made to rebuild and in any rebuilt entity itself. Finally, we believe it is important to unwind and avoid remaking governance structures that allow grid actors to perpetuate their self-interests in decision-making, which we term self-centricity. Part III discusses each of these more fully, where we explain that all three criteria are essential to a robust, progressive grid governance structure.

In Part IV, we apply these principles to a specific example: the capacity markets operated by some regional grid operators that pay resources to be on standby and called upon if necessary, and the Minimum Offer Price Rule (MOPR) that has made participation in capacity markets difficult, if not impossible, for some clean energy resources. The repeated attempts to fix this problem fit all three of our criteria for rebuilding. So we put this option on the table, calling for the end of capacity markets as a possibility. We describe a

30. While we focus on regulatory change, we acknowledge that at times some change may require legislative actions, but we largely do not specify how that might come about. *See infra* Part II.

potential market structure involving energy-only markets, that is, regional markets that only trade electricity and other resources, and we describe features of an energy market that comport with the principle of resource agnosticism and our other principles for rebuilt entities.

In calling for bold action of this sort, we do not diminish the significant contributions of those who worked tirelessly over the past quarter century to create and improve grid governance structures, often encountering substantial opposition from entrenched interests. Indeed, our criteria for rebuilding draw upon the work of other scholars, acknowledging and reflecting their core ideas.³¹ We simply conclude that it is time to include rebuilding as an option in *any* ongoing conversation about achieving major policy goals for the grid. To further allow others' ideas to influence the conversation, we advance rebuilding as one option for consideration but not the sole one. We also acknowledge, as others do, that change will not be easy. Any proposals we describe here will face legal, political, and other obstacles. We understand and appreciate this, but believe it is time to move forward and urge others to follow the framework set forth in this Article.

I. LIMITATIONS OF CURRENT ANALYSIS

We begin with a look at the status quo. The current distribution of governance institutions in today's electric grid is best described as a tangled web. To the uninitiated, it must seem baffling. Through many decisions made over the course of the past century, we have a portfolio of grid governance institutions that is a "curious mix of public and private," with responsibility divided across multiple jurisdictions and types of institutional actors.³² Regional grid operators subject to oversight by a federal agency, the Federal Energy Regulatory Commission (FERC), cover two-thirds of the country (but not the rest) and operate the transmission lines in their regions and wholesale markets in which electricity is bought

31. See, e.g., *infra* notes 137-143 and accompanying text (discussing proposals advanced in Klass et al., *supra* note 6). While we focus on the work of energy law scholars, we appreciate that scholars in other disciplines such as organizational behavior might have prescriptions for what to do once the idea of rebuilding is on the table. We do not reference or preclude such discussion.

32. Klass et al., *supra* note 6, at 977.

and sold.³³ These markets are not at all like the stores consumers associate with “buying at wholesale,” because the wholesale price is rarely passed on directly to consumers.³⁴ State public utility commissions (PUCs) are responsible for setting retail utility rates, so there is no mechanism for a consumer to pay the wholesale price directly.³⁵ No two RTOs do things exactly the same way, which results in a different system of regulation in the Northeast and mid-Atlantic than in the Midwest and California.³⁶ Texas is its own regulatory world.³⁷ What works there (or what did not work, in the Winter Storm Uri debacle) would be considered anathema elsewhere.

At the retail level, where customers interact with this system, the majority of states rely on traditional regulation by PUCs.³⁸ Utility regulation under the purview of PUCs works much as it has for over a century.³⁹ The most notable way in which consumers interact with PUCs is paying the retail rates they set. But roughly a dozen restructured states have retail suppliers which compete to sell electricity but do not distribute it, because monopoly distribution utilities still do that.⁴⁰ PUCs also decide which utilities

33. Fed. Energy Reg. Comm’n, *RTOs and ISOs*, <https://www.ferc.gov/electric/power-sales-and-markets/rtos-and-isos> (last visited Mar. 7, 2023) (showing that ISOs and RTOs cover roughly two-thirds of the nation).

34. U.S. Energy Info. Admin., *Electricity Explained: Factors Affecting Electricity Prices* <https://www.eia.gov/energyexplained/electricity/prices-and-factors-affecting-prices.php> (last visited Mar. 7, 2023) (“The cost to supply electricity changes minute by minute. However, most consumers pay rates based on the seasonal cost of electricity.”).

35. U.S. ENV’T PROT. AGENCY STATE CLIMATE & ENERGY TECH. F., *AN OVERVIEW OF PUCS FOR STATE ENVIRONMENT AND ENERGY OFFICIALS* (May 20, 2010), https://www.epa.gov/sites/default/files/2016-03/documents/background_paper.pdf.

36. For example, RTOs have very different approaches to complying with FERC’s Order 2222 on participation by aggregations of distributed energy resources in wholesale markets. Michael Kuser, *RTOs Take Various Paths to Order 2222 Compliance*, RTO INSIDER (Oct. 21, 2021), <https://www.rtoinsider.com/articles/28885-rtos-various-paths-order-2222-compliance>.

37. JOEL B. EISEN, EMILY HAMMOND, JIM ROSSI, DAVID B. SPENCE & HANNAH J. WISEMAN, *ENERGY, ECONOMICS AND THE ENVIRONMENT* 785–88 (5th ed. 2020) (discussing the Texas market).

38. *Id.* at 479, 783 (discussing how traditional ratemaking continues to apply in a majority of states).

39. *Id.* at 480 (discussing history of rate regulation).

40. Even in restructured states, there is often little competition and most customers continue to be served by their monopoly providers. *Id.* at 780–81. Worse yet, some states have found that non-utility providers (ESCOs) have taken advantage of uneducated consumers, charging them far higher rates than they would have paid under standard service. *See, e.g.,*

can provide service and approve new requests for the construction of infrastructure, including transmission lines and power plants.⁴¹

In this convoluted system, the state and federal relationship is complex, with states controlling many decisions and sharing responsibility with the federal government for others. For example, the governance structure by which transmission lines spanning more than one state are planned for and built splits responsibility between the states and FERC.⁴² FERC, through its authority under the Federal Power Act, has jurisdiction over wholesale electric power transactions and the interstate transmission of electric power.⁴³ States have jurisdiction over the siting of transmission lines.⁴⁴ If a transmission line crosses state lines, each state in the path of the proposed line needs to grant approval for the use of eminent domain along the route.⁴⁵ FERC's Order 1000, which instituted a process for region-wide transmission planning, has been less successful in resulting in construction of new transmission lines than originally hoped for, due in large part to the difficulties of convincing states to back new lines.⁴⁶ The resulting lack of new transmission capacity is often cited as a barrier to

Senator Krueger's ESCO "Slamming" Bill Becomes Law, THE N.Y. STATE SENATE, (Nov. 26, 2019), <https://www.nysenate.gov/newsroom/press-releases/liz-krueger/senator-kruegers-esco-slamming-bill-becomes-law>.

41. U.S. ENV'T PROT. AGENCY STATE CLIMATE & ENERGY TECH. F., *supra* note 35.

42. Alexandra B. Klass & Elizabeth J. Wilson, *Interstate Transmission Challenges for Renewable Energy: A Federalism Mismatch*, 65 VAND. L. REV. 1801 (2012).

43. AVI ZEVIN, SAM WALSH, JUSTIN GUNDLACH & ISABEL CAREY, BUILDING A NEW GRID WITHOUT NEW LEGISLATION: A PATH TO REVITALIZING FEDERAL TRANSMISSION AUTHORITIES 15 (2020).

44. *Id.*

45. *Id.* This can be problematic, as demonstrated most recently by Maine's voters' rejection of a transmission line from Canada to Massachusetts that would run through the state. David Iaconangelo, *\$1B Transmission Smack Down May Upend Northeast Renewables*, ENERGYWIRE (Nov. 12, 2021), <https://www.eenews.net/articles/1b-transmission-smack-down-may-upend-northeast-renewables/>.

46. ROB GRAMLICH & JAY CASPARY, PLANNING FOR THE FUTURE: FERC'S OPPORTUNITY TO SPUR MORE COST-EFFECTIVE TRANSMISSION INFRASTRUCTURE 8 (2021) ("A decade after Order No. 1000's issuance, . . . it is clear that neither the current infrastructure nor the rules governing its development match [the] need."); Klass et al, *supra* note 6, at 1035 ("Virtually no interregional projects have been constructed in the decade since Order No. 1000 went into effect."); Robert H. Schulte & Fredric C. Fletcher, *Why the Vision of Interregional Electric Transmission Development in FERC Order 1000 Is Not Happening*, 33(6) ELEC. J. 106773 (2020).

deployment of more clean energy.⁴⁷ While some scholars and at least one FERC Commissioner support an expanded federal role in transmission siting to overcome this barrier, other actors oppose it.⁴⁸

A. Why Consider Ending/New

Ending entities ought to always be viewed as an option. The current governance structure allows some grid actors to defer or avoid hard truths about suboptimal outcomes.⁴⁹ Time is not the only benchmark of what should stay or go. But until now, no one has provided a framework for deciding why or whether we should have good endings and good beginnings. We therefore explain in the rest of this section when we think it would be a good idea to end a governance institution, and when we do not. Here are our three reasons to consider doing so: current policies are accommodative, lead to unjust results, and the current incremental approach is too slow to advance the clean energy transition.

1. Policy Proposals Have Been Accommodative

Without rebuilding as an alternative, most policy proposals have been accommodative. They fit within the existing landscape of governance institutions, seeking to improve the existing situation without contemplating rebuilding as a better alternative. Some call for relationships among actors to be defined differently.⁵⁰

47. Robinson Meyer, *Unfortunately, I Care About Power Lines Now*, THE ATLANTIC, July 28, 2021. To address these issues, in 2022 FERC issued a proposed rule on revising its transmission policies, one of its most significant actions of recent years. Building for the Future Through Electric Regional Transmission Planning and Cost Allocation and Generator Interconnection, 87 Fed. Reg. 26504 (proposed May 4, 2022) (to be codified 18 C.F.R. pt. 35) [hereinafter FERC Transmission NOPR].

48. FERC Transmission NOPR, *supra* note 47; Miranda Willson, *FERC's Clements Looks West for Grid Reforms*, ENERGYWIRE (Sept. 8, 2021), <https://plus.lexis.com/document?crid=f2339b9e-2ff4-465f-ba94-df1e73d934da&pdocrfullpath=%2Fshared%2Fdocument%2Fnews%2Furn%3AcontentItem%3A63WB-BXK1-DYSH-T188-0000-00&pdsourcegroupingtype=&pdcontentcomponentid=477201&pdmfid=1530671&pdisurlapi=true&cbc=0>; Devin Hartman & Beth Garza, *Plenty of Low-Hanging Fruit: How FERC Can Catalyze Transmission Infrastructure*, UTIL. DIVE (Apr. 9, 2021), <https://www.utilitydive.com/news/plenty-of-low-hanging-fruit-how-ferc-can-catalyze-transmission-infrastructure/598088/>.

49. Welton, *Rethinking Grid Governance*, *supra* note 6, at 263–65.

50. See, e.g., Welton, *Rethinking Grid Governance*, *supra* note 6, at 268 (proposing different oversight for RTOs); VINCE DUANE & TONY CLARK, WHO OWNS THE RTO?: WHY

Some suggest that individual parties have revamped mandates, through statutory and regulatory amendments at the state or federal level.⁵¹ In the rapidly growing body of literature on RTO governance, scholars have proposed useful means to make RTO decision-making more transparent and participatory.⁵² Other scholars and observers have examined the tension between wholesale market policies and states' clean energy policies.⁵³ Still others have proposed solutions to overcome barriers to participation by renewables and storage in markets.⁵⁴ These ideas shed valuable light on the complex relationships among various stakeholders, improving our understanding.

Even getting this far has been no easy task. The proliferation of different types of entities responsible for grid governance, with different mandates and structures, makes analysis difficult. The sea change underway in the composition of grid resources, and the resulting uncertainties about jurisdiction over generation and transmission policies, complicates matters. New means for satisfying supply and demand on the grid, such as distributed energy resources, have become more prominent.⁵⁵ Controversies proliferate over which level of government is responsible for their deployment. To take just one example, FERC's landmark Order 2222, aimed at more widespread incorporation of distributed energy resources in the wholesale markets it regulates, has prompted claims from states that it usurps their traditional authority.⁵⁶ Describing these controversies and identifying

RTO GOVERNANCE IS AN ACHILLES HEEL IN THE CLEAN GRID TRANSITION (2021) (proposing that FERC discard the requirement that RTOs be independent of their participants).

51. Klass et al., *supra* note 6, at 1068–69 (noting that Congress could give FERC more oversight authority over RTOs).

52. See generally Welton, *Rethinking Grid Governance*, *supra* note 6.

53. Danny Cullenward & Shelley Welton, *The Quiet Undoing: How Regional Electricity Market Reforms Threaten State Clean Energy Goals*, 36 YALE J. ON REGUL. BULL. 106 (2019).

54. See, e.g., SUSAN F. TIERNEY, ANALYSIS GRP., WHOLESALE POWER MARKET DESIGN IN A FUTURE LOW-CARBON ELECTRIC SYSTEM: A PROPOSAL FOR CONSIDERATION (2020); ADVANCED ENERGY ECON., PUTTING DISTRIBUTED ENERGY RESOURCES TO WORK IN WHOLESALE ELECTRICITY MARKETS (2019).

55. Joel B. Eisen, *Smart Regulation and Federalism for the Smart Grid*, 37 HARV. ENV'T L. REV. 1 (2013) [hereinafter Eisen, *Smart Regulation*].

56. Regulating one form of distributed energy resources—"demand response" (DR, or demand reductions by electricity consumers treated as a resource in wholesale markets)—has been at the forefront of federal-state jurisdictional tension, in part because states

solutions for addressing them has consumed considerable attention over the past decade.

The existing literature has advanced the discussion beyond merely thinking about improving policy-making in the silos in which decision-making too often resides. Yet viewing it as a whole, it has a common shortcoming. Scholars largely assume that institutions should continue to exist as is.⁵⁷ This too often prompts scholars to favor polycentric governance remedies. At the core is typically an improved concept of networking, requiring public and private actors and different levels of government to work together to advance a new concept of reliability (or some other objective). Presumably, a new and reimagined web of relationships can advance stakeholders' disparate goals and missions.

This analysis is often tailored to the specific combination of state, local, national, regional, and private actors involved in each situation. The proposed solutions can seem well crafted for the challenges at hand, but often do not take a more comprehensive view of what is necessary to bring more clean energy onto the grid. With disparate entities being responsible for grid governance, envisioning more comprehensive solutions is exceedingly difficult. It is far too easy to assess each actor's strengths and weaknesses under the statutory mandates and other factors that constrain it and to seek coordination, rather than suggest a fundamental rethinking

viewed FERC's authority over DR in wholesale markets as intruding on their authority over retail sales. Eisen, *Demand Response's Three Generations*, *supra* note 10. The Supreme Court settled that in 2016 with its decision in *FERC v. EPSA*. Fed. Energy Regul. Comm'n v. Elec. Power Supply Ass'n, 577 U.S. 260 (2016). Yet jurisdictional tension persists, as shown by the burgeoning literature. *Supra* note 8. And in its Order No. 2222-B in June 2021, FERC set aside its previous finding that states could opt out of allowing DER aggregations to participate in regional wholesale markets. *See* Participation of Distributed Energy Resource Aggregations in Markets Operated by Regional Transmission Organizations and Independent System Operators, 18 C.F.R. § 35 (2021); STATE ENERGY & ENV'T IMPACT CTR., NYU SCHOOL OF LAW, ARE WE THERE YET? GETTING DISTRIBUTED ENERGY RESOURCES TO MARKETS 4 (2021) (discussing Order No. 2222-B in the context of Order No. 2222 implementation).

57. A recent comprehensive and thoughtful analysis of RTOs' shortcomings comes closest to saying otherwise, although it stops short of calling for RTOs' end and instead proposes four possible alternative pathways to "transform them into regional entities capable of accomplishing evolving public objectives." Welton, *Rethinking Grid Governance*, *supra* note 6, at 265. One pathway might involve ending entities such as capacity markets (*id.* at 266), although others might not. Jacobs, *supra* note 6, discusses how new agencies already created at the state level impact energy governance. No analysis of which we are aware proposes creating or ending other forms of grid governance institution. And we propose what no one else has: an overarching framework for rebuilding any grid governance institutions.

of the underlying structure. We have been plumbers when architects are needed.

Some examples will suffice to explain this. Numerous white papers have promoted wholesale market reforms.⁵⁸ But they largely call for maintaining current market structures, maintaining control in the RTOs, and keeping electricity dispatch largely unchanged.⁵⁹ The changes being called for are very much incremental and accommodative. State regulators and those advising them have been no more ambitious, as the capacity market discussion demonstrates. Given the potential impact of FERC decisions on state policy goals, New Jersey recently contemplated leaving the organized markets altogether, although it eventually paused this action.⁶⁰ Consultants assessing whether that would be the best option modelled a state exit from the markets alongside other choices. The proposed “best” solution—termed the Integrated Clean Capacity Market—built on the existing capacity markets, working within the current market structure and accommodating New Jersey’s goals in pursuing clean energy.⁶¹ It gave no thought to a future in which the capacity markets did not exist at all.

State legislatures have also been accommodative. North Carolina’s recent law (HB 589) mandating competitive procurement of renewable energy was “the first major piece of comprehensive energy legislation” in the state since 2007.⁶² However, it allowed the

58. See, e.g., ENERGY + ENV’T ECON., SCALABLE MARKETS FOR THE ENERGY TRANSITION: A BLUEPRINT FOR WHOLESAL ELEC TRICITY MARKET REFORM 9–10 (2021) (proposal for “bilateral clean energy markets” to complement existing capacity markets with trading in attributes of clean energy resources); WORLD RES. INST., MARKET DESIGN FOR THE CLEAN ENERGY TRANSITION: ADVANCING LONG-TERM APPROACHES (2020) (summary of workshop proceedings with recommendations).

59. For example, this is true of both papers cited in the previous footnote.

60. New Jersey contemplated an “integrated clean capacity market” design outside of the PJM capacity market. This would have allowed the state to put its interests at the forefront of decisions to build or retire power plants, while requiring the state to meet resource adequacy requirements. N.J. BD. OF PUB. UTILS., ALTERNATIVE RESOURCE ADEQUACY STRUCTURES FOR NEW JERSEY (2021); *infra* note 68 and accompanying text (discussing “resource adequacy”). The state paused this idea once PJM adopted a partial MOPR rollback. Jason York, *NJ BPU Accepts Continued PJM Capacity Market Participation – For Now*, RTO INSIDER (July 14, 2021), <https://www.rtoinsider.com/articles/28209-nj-bpu-accepts-continued-pjm-capacity-market-participation-for-now>.

61. N.J. BD. OF PUB. UTILS., *supra* note 60, at 13–14.

62. N.C. Sustainable Energy Ass’n, *North Carolina House Bill 589: Competitive Energy Solutions For North Carolina*, <https://energync.org/hb589/> (last visited Mar. 4, 2023).

utilities to satisfy thirty percent of the competitive procurement requirement,⁶³ which the utility could do by setting up unregulated subsidiaries and minimizing competition.⁶⁴ The statute also allowed utilities to purchase other projects, thereby allowing them to control even more of the renewable generation in the state.⁶⁵ Besides simply legislating zero competitive procurement, it seems unlikely that the legislature could have been less accommodative. And the trend seems to be continuing—a 2021 law (HB 951) limits oversight of utility spending by the North Carolina Utilities Commission and allows multi-year rate cases with automatic increases for costs.⁶⁶ It also allows the utility to over-earn on profit and keep that additional money paid by ratepayers.⁶⁷ Accommodative, indeed, with no thought given to how a differently constituted entity might do better at promoting solar in the state.

To all this, consider the alternative of rebuilding. A requirement to contemplate the opposite of the status quo—that is, ending some or all of the governance structure completely—can accomplish much more than these accommodative proposals. It would prompt a more comprehensive evaluation of the status quo, which in turn can have salutary effects. Returning to the MOPR example from above, rather than tinkering with the MOPR, one alternative should be to end the capacity market entirely. That might in turn prompt a useful discussion about why a capacity market exists in the first instance and whether it is needed at all.

This could bring region-wide considerations of resource adequacy to the fore and improve decision-making. We use “resource adequacy” here in the way it is understood by modern

63. N.C. GEN. STAT. § 62-110.8(b)(4).

64. Julian Spector, *Duke Drops Largest Solar Project in North Carolina Procurement – Its Own*, GREENTECH MEDIA (Aug. 6, 2019), <https://www.greentechmedia.com/articles/read/duke-drops-largest-solar-project-in-north-carolina-procurement-its-own>. See also JOHN D. WILSON, MIKE O’BOYLE, RON LEHR & MARK DETSKY, ENERGY INNOVATION, MAKING THE MOST OF THE POWER PLANT MARKET: BEST PRACTICES FOR ALL-SOURCE ELECTRIC GENERATION PROCUREMENT 6–7 (2020).

65. N.C. GEN. STAT. § 62-110.8(b)(4) (waiving the 30% limit for projects acquired in this fashion).

66. 2021-165 N.C. Sess. Laws 3–9; Ethan Howland, *North Carolina Passes Bill Expected to Give Duke Timely Cost Recovery, Implement Clean Energy Plan*, UTIL. DIVE (Oct. 8, 2021), <https://www.utilitydive.com/news/duke-energy-cost-recovery-north-carolina-bill-climate/607671/>.

67. 2021-165 N.C. Sess. Laws 3–9.

analysts: ensuring there is enough supply of electricity (and backup resources when needed) to serve load even under extreme conditions, and deciding how the grid should be regulated to accomplish this goal.⁶⁸ Deciding how much electricity is needed requires the grid operator, utility, or other responsible entity to take into account the proliferation of new means for matching supply and demand, such as increased deployment of renewable energy systems.⁶⁹ While we agree that resource adequacy is necessary, we disagree that achieving it requires decision-makers to constrain the range of possibilities to accommodative proposals.

Consider a comparable situation: the requirement in environmental law to compare moving forward with a proposed project to the alternative of doing nothing at all. This might seem counter-intuitive: why ask an agency to consider an option it has already rejected? Yet as the literature on this subject suggests,⁷⁰ once all participants realize that this is a realistic option, optimum solutions can often emerge precisely because the decision-making process is no longer frozen in amber. Comparing what one plans to do to the do-nothing alternative can help justify a project more effectively or even prompt critical thinking that alters a project's trajectory with a more beneficial outcome. Of course, considering ending a grid governance institution is not the same thing as thinking critically about a "do nothing" alternative. But the central proposition is the same: thinking about life without the entity can make for more comprehensive decision-making.

2. Utility Dominance Leads to Inefficient and Unjust Outcomes

Next, consider the elephant in the room: utility dominance of important decision-making junctures in grid governance. We have a love-hate relationship with electric utilities. They can be important drivers of change because they control the existing

68. ROB GRAMLICH, GRID STRATEGIES LLC, ENSURING LOW-COST RELIABILITY: RESOURCE ADEQUACY RECOMMENDATIONS FOR A CLEAN ENERGY GRID (2021); *Resource Adequacy - What Is It And Why Should You Care?*, GRIDWORKS (June 17, 2018), <https://gridworks.org/2018/06/resource-adequacy-what-is-it-and-why-should-you-care/>.

69. WORLD RES. INST., *supra* note 58, at 11 (comments of Susan Tierney, Analysis Group).

70. See, e.g., Sam Kalen, *NEPA's Trajectory: Our Waning Environmental Charter From Nixon to Trump?*, 50 ENV'T. L. REP. 10398 (2020).

infrastructure and distribution system.⁷¹ They own substantial assets that make the grid work, and it is impossible to imagine making the lifeblood of modern life work without them, at least in the near term when it is not yet fully possible to rely on distributed energy resources to satisfy our demand. Yet many (including us) have pointed out that they often resist or slow walk change, or, worse yet, bend the arc of change to meet their self-interest. The evidence of their abuses of power is legion, with substantial (and warranted) criticism of their self-dealing and numerous calls for them to do better.⁷²

At the risk of stating the obvious, existing governance institutions enshrine utilities' power and dominance.⁷³ Utilities are key decision makers at numerous points in the grid's governance structure. As owners of transmission lines, their voting power allows them to dominate the RTO governance process.⁷⁴ Regulatory capture at state commissions gives them more power.⁷⁵ For decades, utilities have liked building new infrastructure because they can include it in their "rate base" and recover its costs from their customers.⁷⁶ States' clean energy initiatives or "grid modernization" programs often lead to utilities winding up at the feed trough getting paid even more to undertake capital projects.⁷⁷

71. Joel B. Eisen & Felix Mormann, *Free Trade in Electric Power*, 2018 UTAH L. REV. 49, 82 (2018).

72. *Supra* notes 14–19 and accompanying text.

73. Welton, *Rethinking Grid Governance*, *supra* note 6.

74. Hartman & Garza, *supra* note 48 (noting that, "current governance structures cede discretion to anti-competitive transmission fiefdoms where incumbents rule the roost"); BENTHAM PAULOS, 100% CLEAN ENERGY COLLABORATIVE, THE GOVERNANCE OF WHOLESALE POWER MARKETS 11 (2021).

75. Heather Payne, *Game Over: Regulatory Capture, Negotiation, and Utility Rate Cases in an Age of Disruption*, 52 U.S.F. L. REV. 75 (2018) [hereinafter Payne, *Game Over*]; Scott Hempling, "Regulatory Capture": Sources and Solutions, 1 EMORY CORP. GOVERNANCE AND ACCOUNTABILITY REV. 23 (2014); George J. Stigler, *The Theory of Economic Regulation*, 2 BELL J. OF ECON. AND MGMT. SCI. 3 (1971).

76. EISEN ET AL., *supra* note 37, at 481 (discussing utilities' rate formula and rate of return); MIT ENERGY INITIATIVE, UTILITY OF THE FUTURE 150 (2016); David Roberts, *The Simple Reason Most Power Utilities Suck*, VOX (Sept. 4, 2017), <https://www.vox.com/2016/6/29/12038074/power-utilities-suck>.

77. Two examples (among many) are the requirements of the Virginia Clean Economy Act that empower Dominion Energy to build 3,000 MW of offshore wind capacity, and the California PUC's approval in a rate case order of grid modernization spending by the utility Southern California Edison, both of which allowed massive new capital expenditures to be added to rate base. VA. CODE ANN. § 56-585.1:11; S. Cal. Edison Co., No. 21-08-036 (Cal. Pub. Utils. Comm'n Aug. 19, 2021) (decision on application for authorization to increase rates).

Even when states address the admitted self-interest of utilities with innovative strategies like performance-based ratemaking, utilities find ways to ensure there is more upside for them, obtaining financial benefits for meeting goals that a regulator could simply have required of them.⁷⁸ Decoupling, a well-intentioned idea, is yet another example of where utilities have their cake and eat it too.⁷⁹

Unless we start over, grid governance reform proposals leave utilities in charge, especially if they control the reform levers. In RTO governance structures, they can squelch any redistribution of authority that would impact them negatively.⁸⁰ It is hard to imagine that they would vote against their self-interest to yield their power. Utilities defend against state-level reforms in numerous ways, using their substantial financial muscle to persuade decision-makers, legally or otherwise.⁸¹ A wide range of stakeholders have promoted reforms to this process.⁸² Yet surprisingly little thought is given to the benefits that could accrue by ending utility dominance, removing certain regulatory entities altogether, or adding new ones that would decrease utilities' power.

78. For example, North Carolina's HB 951 empowers the Utilities Commission to use PBR to give utilities like Duke Energy incentives for such activities as emissions reductions, and to fold recovery into "multi-year rate plans" that allow earlier recovery from ratepayers than normal. N.C. GEN. STAT. § 62-133.16; Daniel Tait, *North Carolina HB 951 Could Mean Windfall for Duke, Large Rate Increases for Customers*, ENERGY & POL'Y INST. (June 17, 2021), <https://www.energyandpolicy.org/duke-energy-windfall-hb-951/>.

79. Decoupling involves separating ("decoupling") utility revenues from sales so that utilities are compensated for their costs plus a fair rate of return even if sales decrease, by, for example, adopting energy efficiency measures. As of 2020, 18 states had some form of decoupling for electric utilities. Dylan Sullivan & Donna De Costanzo, *Gas and Electric Decoupling*, NRDC (Aug. 24, 2018), <https://www.nrdc.org/resources/gas-and-electric-decoupling>. In 64% of cases in a recent study, decoupling led to utility rate increases that often persisted into future years. Peter A. Cappers, Andrew Satchwell, Max Dupuy & Carl Linvill, *The Distribution of U.S. Electric Utility Revenue Decoupling Rate Impacts from 2005 to 2017*, THE ELEC. J., Issue 33:10, at 1 (2020).

80. Hartman & Garza, *supra* note 48.

81. *Supra* note 15–17 and accompanying text.

82. In Virginia, for example, utility rate reform proposals in 2021 attracted a broad group of supporters. Sarah Vogelsong, *Bipartisan Coalition Looks to Reform Virginia's System of Electric Utility Regulation*, VA. MERCURY (Jan. 18, 2021), <https://www.virginiamercury.com/2021/01/18/bipartisan-coalition-looks-to-reform-virginias-system-of-electric-utility-regulation/>. None of the proposals were successful, however, due in large part to utility opposition. Eisen, *COVID-19 and Energy Justice*, *supra* note 12.

3. Incrementalism Has Slowed Progress on Addressing Climate Change

A final reason to consider rebuilding as an option is our collective slow progress on climate goals. While we have known about climate change and its likely impacts for decades,⁸³ we have done little. The most recent report of the IPCC is a “code red” for humanity: we no longer have the luxury of waiting to take action to reverse the planet’s warming, but, as noted, we have not done nearly enough to date.

Because of that inaction, we are now reaping the fruits of our (lack of) labor: melting ice sheets,⁸⁴ unprecedented fire seasons,⁸⁵ reservoirs at record lows due to drought,⁸⁶ and excessive heat that melts the infrastructure used for public transit and was “virtually impossible” without human-caused climate change.⁸⁷ And that’s just 2021. Scientists tell us to expect more in the future, unless we act more quickly to decrease global carbon emissions.⁸⁸ Youth leaders

83. Peter Sinclair, *Judgment on Hansen’s ‘88 Climate Testimony: ‘He Was Right’*, YALE CLIMATE CONNECTIONS (June 20, 2018), <https://yaleclimateconnections.org/2018/06/judgment-on-hansens-88-climate-testimony-he-was-right/> (reflecting on Congressional testimony in 1988 by then-NASA climate scientist Dr. James Hansen that global warming had already begun); Shannon Hall, *Exxon Knew About Climate Change Almost 40 Years Ago*, SCI. AM. (Oct. 26, 2015), <https://www.scientificamerican.com/article/exxon-knew-about-climate-change-almost-40-years-ago/>.

84. Greenland had a historic melt off one week in July 2021. *8.5 Billion Tonnes of Greenland Ice Melt in One Day*, THE ENERGY MIX (Aug. 3, 2021), <https://www.theenergymix.com/2021/08/03/8-5-billion-tonnes-of-greenland-ice-melt-in-one-day/>.

85. Kate Smith, *Experts Call for Expanded Wildfire Prevention Tactics as Fire Seasons Become More Extreme*, YAKIMA HERALD-REPUBLIC (Sept. 7, 2021), https://www.yakimaherald.com/news/local/experts-call-for-expanded-wildfire-prevention-tactics-as-fire-seasons-become-more-extreme/article_5ff9f141-1260-5bc9-9ad7-e0b35fe4aca3.html.

86. Kaitlin Sullivan, *America’s Two Largest Water Reservoirs at Record Lows*, ECOWATCH (Jul. 14, 2021), <https://www.ecowatch.com/water-reservoirs-record-lows-2653781043.html> (noting that Lake Mead and Lake Powell, upon which much of the West depend for water, hit record lows in 2021).

87. *It’s Official: July Was Earth’s Hottest Month on Record*, NAT’L OCEANIC AND ATMOSPHERIC ADMIN. (Aug. 13, 2021), <https://www.noaa.gov/news/its-official-july-2021-was-earths-hottest-month-on-record>; Oliver Milman, *Urban Heat Island Effect Exacerbating Summer Heatwaves, Study Shows*, THE GUARDIAN (July 14, 2021), <https://www.theguardian.com/environment/2021/jul/14/urban-heat-island-effect-heatwave> (discussing summer heat in the Pacific Northwest and elsewhere). Indeed, this is likely one of the cooler summers of the next thirty years; imagine looking back on 2021 and thinking of it as so much more temperate than what the majority of the world is currently experiencing.

88. Simon Evans, Josh Gabbatiss, Robert McSweeney, Aruna Chandrasekhar, Ayesha Tandon, Giuliana Viglione, Zeke Hausfather, Xiaoying You, Joe Goodman & Sylvia Hayes, *COP26: Key Outcomes Agreed at the UN Climate Talks in Glasgow*, CARBON BRIEF (Nov. 15,

globally are calling for a more concerted—and quick—effort to maintain a livable future.⁸⁹

Utility dominance has played a large part in the lack of progress to date. Utilities and their regulators have not transitioned rapidly enough away from fossil fuel sources of electricity generation and reduced carbon emissions. Our current generation mix focuses on fossil fuel resources: natural gas, coal, and sometimes oil.⁹⁰ Some utilities continue to balk at rapid decarbonization, arguing for pursuing an incremental path.⁹¹ While many utilities have made net-zero commitments, there is no guarantee that utilities will achieve these targets quickly or in the most cost-effective manner. The actual plans on how they will get to this future are terribly wanting.⁹² Utilities are still planning gigawatts of new natural gas plants, many of which are likely to both become stranded assets (which ratepayers will need to bail out) and continue to dig the climate hole deeper while they are operating.⁹³

2021), <https://www.carbonbrief.org/cop26-key-outcomes-agreed-at-the-un-climate-talks-in-glasgow/>; *What You Need to Know About the COP26 UN Climate Change Conference*, UN ENV'T PROGRAMME (Nov. 1, 2021), <https://www.unep.org/news-and-stories/story/what-you-need-know-about-cop26-un-climate-change-conference> (describing the urgency of nations agreeing on emissions reductions).

89. Brad Dress, *Greta Thunberg Dismisses COP26 Pact: 'The Real Work Continues Outside These Halls'*, THE HILL (Nov. 13, 2021), <https://thehill.com/policy/energy-environment/581437-greta-thunberg-dismisses-cop26-pact-the-real-work-continues-outside/>.

90. *Electricity Explained: Electricity Generation, Capacity, and Sales in the United States*, U.S. ENERGY INFO. ADMIN. (July 15, 2022), <https://www.eia.gov/energyexplained/electricity/electricity-in-the-us-generation-capacity-and-sales.php> (last visited Mar. 6, 2023) (60% of generation comes from these sources).

91. For example, the utility American Electric Power opposed the proposed (then discarded) “Clean Electricity Payment Program” that would have paid utilities for rapid decarbonization, stating it would force utilities to act “too rapidly.” Benjamin Storrow, *Major Utility Questions Biden's Signature Climate Plan*, CLIMATEWIRE (Sept. 15, 2021), <https://www.eenews.net/articles/major-utility-questions-bidens-signature-climate-plan/>.

92. The Smart Electric Power Alliance (SEPA) “Utility Carbon-Reduction Tracker” tracks individual utilities’ carbon reduction targets. *Utility Carbon-Reduction Tracker*, SMART ELEC. POWER ALL., <https://sepapower.org/utility-transformation-challenge/utility-carbon-reduction-tracker/> (last visited Mar. 6, 2023). Utilities serving a majority of U.S. electricity customers now have these targets, *id.*, but “many [utilities] fall short of their ambitions.” Trabish, *supra* note 19. See also JOHN ROMANKIEWICZ ET AL., SIERRA CLUB, THE DIRTY TRUTH ABOUT UTILITY CLIMATE PLEDGES 1, 4 (2020) (study of 79 utility operating companies noting an “enormous gap between utilities’ current practices and what they need to do to protect people and the planet” and that “[t]he 20 companies that generate the most power from coal have only committed to retire 17 percent of their remaining coal generation by 2030”).

93. ROMANKIEWICZ ET AL., *supra* note 92.

Given the guaranteed profit that attaches to every monopoly capital investment, it is highly unlikely that leaving utilities to their own devices with minimal oversight will result in much decarbonization. They are continuing to rack up record-high investments in power plants, not distributed grid infrastructure that would benefit customers or the planet.⁹⁴ Utilities are enthusiastic about “grid modernization” programs and large advanced metering infrastructure (AMI) installations, but there is no big climate payoff as yet.⁹⁵ Knowing what we know, it is obvious that we must do more, and quickly. Quicker action would benefit utility customers, because transitioning to clean energy would actually be cheaper than keeping fossil plants running, as current market structures would fiscally support and many utilities would prefer.⁹⁶ And it would benefit the planet’s continued existence.

4. Summary

Why discuss ending some institutions, rather than mending them? We believe the more appropriate question is: why not? There is no compelling reason to hold on tenaciously to the current distribution of grid governance institutions. It is an “administrative construct.” That term typically refers to the structure of wholesale electricity markets,⁹⁷ but it aptly fits all grid governance institutions.

94. *Id.*; Roberts, *supra* note 76 (noting that “utilities’ strong preference for capital investments puts them *intrinsically* at odds with smarter grids and privately owned DERs.”).

95. Deploying smart meters and other AMI elements is expensive. For example, Consolidated Edison’s AMI installations were projected to cost ratepayers more than \$1.7 billion. CONSOLIDATED EDISON, ADVANCED METERING INFRASTRUCTURE BUSINESS PLAN 56 (2015). While the utility touted possible benefits exceeding this figure, *id.*, the reality is often otherwise. One recent analysis found that, “Utilities are largely missing the opportunity to utilize AMI data to improve their energy efficiency and demand response offerings.” RACHEL GOLD ET AL., AM. COUNCIL FOR AN ENERGY-EFFICIENT ECON., LEVERAGING ADVANCED METERING INFRASTRUCTURE TO SAVE ENERGY iii (2020). There are numerous barriers to better climate payoff, such as a lack of concretely demonstrated benefits that prompts utilities to do more. *Id.* at 32.

96. See, e.g., William Driscoll, *Renewables up to 90% by 2050 Would Cost Less Than Current Generation Mix: NREL Study*, PV MAG. (June 28, 2021), <https://pv-magazine-usa.com/2021/06/28/renewables-up-to-90-by-2050-would-cost-less-than-current-generation-mix-nrel-study/>.

97. Travis Kavulla, *There Is No Free Market for Electricity: Can There Ever Be?*, 1 AM. AFFS. 126 (2017); FED. ENERGY REGUL. COMM’N, DANLY OFFICE WHITE PAPER: THE REQUIREMENT THAT COMPETITIVE MARKETS BE PROTECTED FROM THE EXERCISE OF MARKET POWER APPLIED TO RTO CAPACITY MARKETS (2021), <https://www.ferc.gov/news->

There is no exchange of electricity between sellers and buyers at a pure market price. Instead, prices are set by administrative decisions. Grid operators, PUCs, and others regulate in byzantine and sometimes incomprehensible ways, adjusting their administration of relationships among sellers, buyers, and ratepayers with rules designed to promote specific outcomes.⁹⁸

These structures are *sui generis*. After many changes made over time, they look jerry-rigged rather than organic.⁹⁹ Anyone unfamiliar with grid governance would not recognize them, as they have no analogues elsewhere. Few other places feature administrative price-setting for commodities,¹⁰⁰ and fewer still have governance structures with networks of interlocking relationships with disparate entities responsible for (and in some cases overlapping authority over) major functions. Scholars have said this in many ways: for example, stating that the RTOs are “unique institutional constructs” with no real equivalent elsewhere.¹⁰¹

events/news/danly-office-white-paper-requirement-competitive-markets-be-protected-exercise [hereinafter FERC, DANLY WHITE PAPER] (defending the use of the term “administrative construct” with respect to capacity markets, noting that “market design . . . , by its very nature, must be based on an administrative construct”).

98. FERC, DANLY WHITE PAPER, *supra* note 97 (capacity markets are “circumscribed by complex rules that address issues such as the definition of the product being sold, the entities entitled to participate as sellers, and the obligations associated with receiving a capacity award”). Stakeholders often disagree about whether this leads to optimal outcomes. In an online dialogue, Ari Peskoe, Director of the Electricity Law Initiative at the Harvard Law School Environmental and Energy Law Program, criticized the “‘construct’ framing” for allowing a hypocrisy under which “MOPR . . . create[s] a walled garden for private equity investors in natural gas fired power plants” and then allows stakeholders to claim “the result is akin to a ‘free market’ where the actions of buyers and sellers generate competitive prices.” In response, FERC Commissioner Mark Christie stated that, “Yes, it is an administrative construct and it has market characteristics but it’s an administrative construct designed to pay generating resources in advance to be ready and able to perform. That’s what it is and nothing wrong with saying that.” Ari Peskoe (@AriPeskoe), TWITTER (May 20, 2021, 11:45 AM), <https://twitter.com/AriPeskoe/status/1395435424701501441>; Ari Peskoe (@AriPeskoe), TWITTER (May 25, 2021, 7:19 AM), <https://twitter.com/AriPeskoe/status/1397180467183591429>.

99. William Boyd and Ann Carlson appropriately call our diverse state utility regulatory models “accidents of federalism,” not carefully planned schemes. William Boyd & Ann E. Carlson, *Accidents of Federalism: Ratemaking and Policy Innovation in Public Utility Law*, 63 UCLA L. REV. 810, 816 (2016).

100. Kavulla, *supra* note 97 (noting that, “few products are regulated in such a command fashion as electricity”).

101. Klass et al., *supra* note 6, at 1058. To further complicate this, each RTO has its own unique membership and governance structure. NEW ENGLAND STATES COMM. ON ELEC., GOVERNANCE STRUCTURE AND PRACTICES IN THE FERC-JURISDICTIONAL ISOS/RTOs (2021).

As we note, the justification for sweeping change to this system is overwhelming. Yet grid governance structures need not end simply because they are unique. The securities markets are administrative constructs, too, but no one calls for their demise.¹⁰² Instead, we simply reiterate that what administrators make, they can and sometimes should re-make. Considering rebuilding as an option will expose the preferences favoring the status quo, even if the decision-making process does not always lead to it.

An example, to which we return in Part IV, are the rules governing capacity markets. These wholesale markets in some (but not all) regions pay power plant operators and others to be on standby, to provide electricity when and where needed. The raging debate over whether capacity market rules hamper the entry of clean energy resources focuses on arcane and complex formulas and rules. To give a sense of the complexity involved, the Minimum Offer Price Rule (MOPR) requires some, but not all, power plants in a region to offer to sell their output at a minimum price in a regional energy market, hence the “minimum” in MOPR. This aims to offset the incentives provided by states that subsidize renewable or zero-carbon energy resources.

Assessing whether the formula for setting the MOPR in a region makes specific clean energy plants uneconomic is a complex undertaking. Not surprisingly, numerous ideas have been proposed.¹⁰³ Some would eliminate the MOPR altogether, or revise it so that certain resources would not be subject to it.¹⁰⁴ As an alternative, some states considered taking the ball and going home: exiting the capacity markets altogether and leaving power plants in other states to stoically defend regional electricity reliability.¹⁰⁵

102. FERC, DANLY WHITE PAPER, *supra* note 98.

103. See, e.g., Tom Rutigliano, *Fix the MOPR Problem with a Dose of Humility*, SUSTAINABLE FERC PROJECT (Apr. 28, 2021), <https://sustainableferc.org/fix-the-mopr-problem-with-a-dose-of-humility/> (discussing a number of proposals).

104. *Id.* (suggesting that PJM should “Get Rid of the MOPR and the Horse It Rode In On”); Jeff Dennis, *MOPR Rollback Proposal Heads to FERC*, ADV. ENERGY UNITED (July 26, 2021), <https://blog.aee.net/mopr-rollback-proposal-heads-to-ferc> (last visited Mar. 6, 2023) (“[R]olling back the expanded MOPR once and for all would clear the way for consideration of broader reforms to the capacity, energy, and ancillary services markets that are needed to align them with state and customer clean energy goals and meet the needs of an increasingly decarbonized power grid.”).

105. *Supra* note 60 and accompanying text.

Our aim is not to evaluate the merits of the individual MOPR reform proposals. Instead, we observe that the proposed alternatives often omit an obvious idea: ending the entire capacity market if it does not lead to cleaner energy (or achievement of other desirable state policy goals). We propose precisely this below in Part IV, together with an energy market design that would meet our preferred criteria for rebuilding.¹⁰⁶

This rigorous analysis should extend to the entire grid governance structure. Consider the RTOs as an example. The RTO idea was bold but only partially implemented.¹⁰⁷ Why have this particular hodgepodge of entities that govern the grid? Why should two-thirds of the nation govern transmission and markets one way, and the rest a completely different way? If we vigorously pursue answers to these questions, we might wind up with more RTOs, fewer, or none at all.¹⁰⁸ And at the state level, what about the split between traditionally regulated states and restructured ones?

106. We acknowledge that this would raise objections. Perhaps the most salient is that customers would suffer in an “energy-only” market, that is, a regional wholesale market construct without a capacity buffer. The principal problem in such a design is that higher energy prices at specific peak times are a feature, not a bug: they are intended to serve as an incentive for the construction of new regional capacity. Jacob Mays, Michael T. Craig, Lynne Kiesling, Joshua C. Macey, Blake Shaffer & Han Su, *Private Risk and Social Resilience in Liberalized Electricity Markets*, 6 *JOULE* 369, 369–70 (2022); David B. Spence, *Naïve Energy Markets*, 93 *N.D. L. REV.* 973, 1012 (2017); Peter Cramton, *Electricity Market Design*, 33 *OXFORD REV. OF ECON. POL’Y* 589, 602 (2017); John P. Perkins III, *Electric Capacity Markets and Resource Adequacy: Recommendations to Properly Balance Competition and Reliability in RTO and ISO Regions*, 5 *GEO. WASH. J. ENERGY & ENV’T L.* 26 (2014). This is effectively the state of play in Texas, which has no capacity market. See Spence, *supra*, at 1012. Avoiding the worst of what happened there in the winter of 2020 would be a good thing. Mays et al., *supra* (discussing the reasons for the failures of the Texas energy-only market design). The energy market design that we propose is intended to avoid a repeat of this debacle. See Part IV.

107. SEVERIN BORENSTEIN & JAMES BUSHNELL, *NAT’L BUREAU OF ECON. RSCH., THE U.S. ELECTRICITY INDUSTRY AFTER 20 YEARS OF RESTRUCTURING* 4 (2015).

108. A recent white paper proposed sweeping reforms to RTO governance structures, including possible contemplation of a model under which transmission owners would oversee the grid instead of RTOs. DUANE & CLARK, *supra* note 50; Miranda Willson, *Fight over FERC Grid Order Could Scramble Electricity Mix*, *ENERGYWIRE* (Nov. 9, 2021), <https://www.eenews.net/articles/fight-over-ferc-grid-order-could-scramble-electricity-mix/> (contrasting this idea to RTO expansion proposals). Another white paper proposed creating “emergent markets” similar to the Western Energy Imbalance Market that the California ISO administers. These would not have the design and operational characteristics of RTOs. RAY GIFFORD & MATT LARSON, *WILKINSON BARKER KNAUER, LLP, EMERGENT ELECTRICITY MARKETS: THE ECONOMIC AND ENVIRONMENTAL CASE FOR MARKETS WITHOUT RTOs* (2021). See *infra* note 254 and accompanying text (discussing the Southeast Energy Exchange Market’s creation).

Retail restructuring came to a screeching halt in the wake of the California energy debacle in the early 2000s and left a minority of states where consumers can choose their electricity provider.¹⁰⁹ Defenders of the status quo are hard to find, but what should the landscape look like going forward? Should we have more competition, less, or none at all?

Contemplating sweeping change begs other questions. When is it necessary? If it is, how should it take place? We argue that specific fundamental values should undergird the need for institutional change, not the mere accretion of regulatory entities and rules over time. Some grid governance institutions have only been around for twenty years or so.¹¹⁰ Most major changes to this system—the advent of RTOs and their markets, in particular—happened in the past two decades. Some institutions are even younger than that.¹¹¹ Some organizations were created for specific purposes but have outlived them.¹¹² There is no reason to assume any must endure in their current form, but this should not depend on how long an entity has existed. While some would advocate for tinkering to help specific entities work and grow, it might be the case that—much like that MySpace account—even recent innovations are not worth keeping.¹¹³ On the flip side, some grid institutions and regulatory relationships are ancient in contemporary terms. The basic cost of service regulation framework dates to the early twentieth century and has not changed much since then.¹¹⁴ The Federal Power Act

109. As of 2017, 13 states and the District of Columbia had retail choice in electricity. 21ST CENTURY POWER PARTNERSHIP, AN INTRODUCTION TO RETAIL ELECTRICITY CHOICE IN THE UNITED STATES (2017), <https://www.nrel.gov/docs/fy18osti/68993.pdf>. Retail choice is not full competition. Payne, *Private (Utility) Regulators*, *supra* note 11, at 1004 (noting that “even in restructured states, the transmission and distribution—the poles and wires—remain controlled by a regulated monopoly”).

110. BORENSTEIN AND BUSHNELL, *supra* note 107, at 3–11 (discussing the transformative changes in grid governance since the 1990s).

111. MEG GOTTSTEIN & LISA SCHWARTZ, REGUL. ASSISTANCE PROJECT, THE ROLE OF FORWARD CAPACITY MARKETS IN INCREASING DEMAND-SIDE AND OTHER LOW-CARBON RESOURCES 6 (2010) (noting that capacity markets began in NE-ISO and PJM in 2006 and 2007).

112. Welton, *supra* note 6, at 265 (noting that “FERC did not expect RTOs to come to have the range of functions and functional policy-making authority that they do today” beyond “managing the flow of electrons over the transmission grid”).

113. MySpace was popular from 2005 to 2008, when many RTO governance institutions were becoming settled in their current form. Nicholas Jackson & Alexis C. Madrigal, *The Rise and Fall of Myspace*, THE ATLANTIC (Jan. 12, 2011), <https://www.theatlantic.com/technology/archive/2011/01/the-rise-and-fall-of-myspace/69444/>.

114. REGUL. ASSISTANCE PROJECT, ELECTRICITY REGULATION IN THE US: A GUIDE 7–8 (2011).

(FPA) has had no major alterations since its enactment in 1935.¹¹⁵ But what “ain’t broke” shouldn’t be fixed. Some scholars have said the FPA is perfectly adequate for today and does not need to be changed.¹¹⁶ We agree. To summarize: what administrators make, they can re-make, and starting over should be an option on the table at all times.

B. Which Institutions Should End?

Having justified rebuilding as an option, we now define which grid governance structures could end. Here, we refer to any of three different types of actions: eliminating an entire regulatory entity (for example, an RTO or PUC), removing a specific market or program that a regulator administers (for example, a wholesale capacity market) while leaving the entity’s remaining structure intact, or comprehensively redefining attributes that define the connection between the regulator and the entities that it regulates (for example, ending or overhauling cost-of-service regulation).

Rebuilding could be possible in any given situation. Consider a wholesale electricity market that fails to deliver progress on climate change and other metrics. That market might be usefully eliminated. Or its rules might be comprehensively redesigned to promote desirable outcomes. Finally, decision-makers might consider eliminating the RTO altogether.¹¹⁷ This might be worthwhile if—even after a market redesign—the RTO’s governance structure makes it impossible to bring more clean energy onto the grid. Another situation where all three options might be feasible is cost of service regulation of utilities by PUCs, which consistently favors utilities’ profitability over progress on climate change and other benchmarks. This system could be ended or redesigned. But if the remaining relationship between PUCs and

115. The FPA’s form has been remarkably stable, except for changes made by the Public Utilities Regulatory Policy Act of 1978 (PURPA) and other laws. HARV. ENV’T L. PROGRAM, *THE FEDERAL POWER ACT IN THE 21ST CENTURY* 1-2 (2015).

116. Christiansen & Macey, *supra* note 8, at 1422 (claiming the federalism model in the article ensures “regulators are able to carry out their responsibilities effectively—just as Congress intended when it enacted the Public Utility Act in 1935”).

117. DUANE & CLARK, *supra* note 50 (noting that discarding the RTO model may be necessary to remedy RTOs’ structural problems). We do not endorse their specific proposals but observe that we are not alone in contemplating this possibility.

utilities still favors the latter, we may be better off if the PUC is reimagined or eliminated.¹¹⁸

We focus on the regulatory sphere because it contains most choke points where progress is being inhibited. Most current conversations about grid governance involve the actions of state and federal regulatory agencies and the stakeholders with whom they interact, and the results they yield in practice for regulated entities and ratepayers.¹¹⁹ By contrast, the statutes in this field often contain broad language such as “just and reasonable” that regulators translate into much more concrete action.¹²⁰ Focusing on the regulatory sphere also reflects our pragmatic view that bold action will often require regulatory solutions, not new legislation. Moreover, legislative developments such as the failure of the 2009 climate bill¹²¹ show it is extraordinarily difficult today to make sweeping legislative progress. Finally, as we note above in Section A.4 of this Part, scholars have suggested that legislative changes may not even be necessary, because the basic architecture of the Federal Power Act that governs the electricity sector is in no need of an overhaul because it is elastic enough to adapt to modern needs.¹²²

Beyond acknowledging that the prospects for new legislation are often challenging, we do not delve into this further, except to note that some specific actions we discuss in this Article might require congressional or state legislative action to amend statutory mandates. This will, of course, depend on the action chosen, as, for

118. We are not the first to contemplate radically revised roles for PUCs in the clean energy transition. *See, e.g.*, William Boyd, *Public Utility and the Low Carbon Future*, 61 UCLA L. REV. 1614 (2014). However, we are not aware of any scholarship that suggests that rebuilding a PUC might require its elimination and replacement.

119. *See, e.g.*, Klass et al., *supra* note 6, at 1006–07 (chart summarizing proposed reforms, most of which would take place in the regulatory sphere); Welton, *Rethinking Grid Governance*, *supra* note 6, at 265 (action on four pathways largely a regulatory matter).

120. Jody Freeman & David B. Spence, *Old Statutes, New Problems*, 163 U. PA. L. REV. 1, 43–62 (2014).

121. Ryan Lizza, *As The World Burns*, THE NEW YORKER (Oct. 3, 2010), <https://www.newyorker.com/magazine/2010/10/11/as-the-world-burns> (discussing the reasons for the Waxman-Markey climate bill’s failure).

122. *Supra* note 68 and accompanying text. On the other hand, legislative change may be desirable. Electricity governance could be improved by specific changes such as the sunset of the Price Anderson Act and modifications to PURPA, the Federal Power Act and the Natural Gas Act.

example, eliminating entities in their entirety at the state level is more likely to require statutory action.

C. Addressing the Root Causes of Incrementalism

How did we get here – and why does that matter? It is easy to blame utilities for incrementalism’s pervasiveness, but they are hardly its only cause. RTOs are unique in their functions and structures, with no real analogue in the law. The ossification of more byzantine stakeholder procedures, more complexity in markets, and more complex relationships with states make it difficult to contemplate anything other than incremental changes.¹²³ Even those intrepid souls who have tackled the subject of regional grid governance have found it challenging just to explain it. RTOs are not noted for their transparency,¹²⁴ so it is often difficult to understand the decision-making process, much less to recommend improvements.¹²⁵ All this virtually channels the discussion to improving existing structures and makes thinking about sweeping solutions impractical.

While state and federal regulatory agencies have wide discretion to form revolutionary new policies,¹²⁶ they are rarely ambitious, and their boldness rarely succeeds in reforming utility governance. History and opposition from incumbent interests constrain boldness.¹²⁷ State PUCs are subject to capture and resource constraints due to state budgets. While some have tried to

123. This choice of “ossification” is deliberate as a rough comparison to noted administrative law scholar Richard Pierce’s term for increasingly more complex procedures in administrative law that make it more difficult to promulgate federal rules. Richard J. Pierce, Jr., *Seven Ways to Deossify Agency Rulemaking*, 47 ADMIN. L. REV. 59 (1995).

124. Regional transmission is a perfect, easy-to-understand example. In the PJM RTO, a private committee “advises on transmission facility matters.” Its agendas are public, but its meetings are not. PJM Interconnection, LLC, *Transmission Owners Agreement-Administrative Committee*, <https://pjm.com/committees-and-groups/committees/toa-ac> (last visited Feb. 2, 2023). A “common interest agreement” provides even more confidentiality. Ari Peskoe (@AriPeskoe), TWITTER (Feb. 25, 2021, 10:23 AM), <https://twitter.com/AriPeskoe/status/1364959193497796619?s=20>.

125. PAULOS, *supra* note 74, at 10.

126. See generally Eisen, *FERC’s Expansive Authority*, *supra* note 8 (discussing the history and current potential of FERC’s authority to remedy discrimination).

127. FERC’s bold initiatives of the past two decades – for example, a Standard Market Design rule that attempted to have wholesale markets pursue a single design – often run into severe opposition from states and impacted utilities. DAVID BOYD, AESL CONSULTING, CAN FERC’S MARKETS AND STATE CLEAN ENERGY POLICIES WORK TOGETHER? 7 (2020).

think big, most do not. Even the most ambitious have had to temper their visions of revolutionary change. Consider New York's "Reforming the Energy Vision" (REV) initiative. Announced with great fanfare and an ambitious agenda in 2014,¹²⁸ the goal was to "reinvent" electricity regulation, "actively spurring clean energy innovation, bringing new investments into the State and improving consumer choice and affordability."¹²⁹ The language used was grandiose—the process was to transform, "changing the way government and utilities work," and "putting customers first."¹³⁰ Indeed, there would be no way to achieve this goal without a massive transition in utility governance.¹³¹

REV has had some successes, notably in measuring the value of distributed resources and spurring innovative demonstration projects.¹³² However, in one critical respect—changing the utility governance structure—a bold proposed paradigm failed to become reality. New York's PSC called for establishing "distribution system platform providers" (DSPP) that might have enabled competition and removed utility company domination,¹³³ but, in the end, the state's PSC simply gave DSPP responsibilities to incumbent utilities.¹³⁴ Little hope for any other outcome still exists.

128. Order on Reforming Energy Vision, No. 14-M-0101 (N.Y. Pub. Serv. Comm'n, Apr. 25, 2014), file:///C:/Users/adamg/Downloads/%7B9CF883CB-E8F1-4887-B218-99DC329DB311%7D.pdf.

129. *Reforming the Energy Vision*, N.Y. DEP'T PUB. SERV., <https://www3.dps.ny.gov/w/pscweb.nsf/all/cc4f2efa3a23551585257dea007dcfe2> (last visited Mar. 10, 2023). The PSC described its role as "aligning markets and the regulatory landscape with the overarching state policy objectives of giving all customers new opportunities for energy savings, local power generation, and enhanced reliability to provide safe, clean, and affordable electric service." *Id.*

130. *Id.*

131. *Id.*

132. Herman K. Trabish, *New York's Landmark Reforming the Energy Vision Framework Remains Both Vital and Unfinished, Analysts Say*, UTIL. DIVE (Dec. 9, 2021), <https://www.utilitydive.com/news/new-yorks-landmark-reforming-the-energy-vision-framework-remains-both-vita/610015/>.

133. Eisen, *Dual Electricity Federalism Is Dead, but How Dead, and What Replaces It?*, *supra* note 8, at 13 (discussing the DSPP idea and its similarities to the "distribution system operator" concept in Europe).

In theory, the DSPP would be a platform similar to well-known platforms like Uber that could enable innovative solutions such as peer-to-peer trading of electricity. *Id.* at 15; see also Eisen & Mormann, *supra* note 71, at 92 (calling the DSPP concept one of two potential "building blocks" of a revolutionary system of trading in electricity).

134. Order Adopting Regulatory Policy Framework and Implementation Plan, No. 14-M-0101 (N.Y. Pub. Serv. Comm'n Feb. 26, 2015); Eisen, *Dual Electricity Federalism Is Dead, but How Dead, and What Replaces It?*, *supra* note 8, at 14.

There is little impetus for unwinding incrementalism in grid governance. Consumers have little meaningful influence.¹³⁵ Public interest groups and trade associations for companies developing and deploying new energy technologies advocate for change, but their voice is limited because they do not control levers of power.¹³⁶ Even as we recognize the incremental nature of change in New York (and other progressive states such as California and Massachusetts), these states are well ahead of the vast majority of others. Few other PUCs have the staff or resources to take transformative action on their own, and without mandates that they do so, the status quo is easy to maintain because utilities can use their power to preserve it.

Finally, the orientation of most existing legal scholarship in this field is tinker first, not replace. For example, in their excellent recent article,¹³⁷ Alexandra Klass, Shelley Welton, Joshua Macey, and Hannah Wiseman outline the serious challenges this byzantine system of actors and institutions poses for bringing more clean energy onto the grid. We agree with virtually all of their basic premises. First and foremost, they have exceptionally described our current institutions.

To the authors, the distribution of governance institutions is “siloeed,” by which they mean that state, regional, and federal entities focus on narrow missions, pursue objectives pursuant to their specific mandates that fail to take a holistic look at the grid, and miss valuable opportunities for collaboration. We could not agree more. Spotighting how this siloeing impacts the ongoing conflict between adding more clean energy and pursuing a reliable grid is valuable, as is attempting to solve it with specific policy prescriptions.¹³⁸ Too often, the pursuit of “reliability” has served as a cudgel that grid actors (usually, but not always, utilities) wield to stymie the addition of clean energy resources. As a result, we also agree wholeheartedly that governance reforms can and should “enhance both clean energy and reliability” as well as other objectives.¹³⁹

135. Shelley Welton, *The Bounds of Energy Law*, 62 B.C. L. REV. 2339, 2342 (2021) (noting that utilities and fossil fuel companies control major decisions).

136. *Id.*

137. Klass et al., *supra* note 6.

138. *Id.* at 1050 (summarizing a number of proposed reforms).

139. *Id.* at 980.

The authors state, “[o]ur goal . . . is to reimagine the siloed regulatory system that has evolved over the past century in energy governance to make its multiplicity work for, rather than against, a transition to a clean and reliable power grid.”¹⁴⁰ We agree that the “multiplicity” of grid governance institutions has been part of the problem, and we urge greater attention to their ideas in four different areas of grid governance: market design; transmission planning, siting, and financing; reliability regulation; and RTO governance.¹⁴¹ Some would involve shifts of authority from one level of government to another, such as reforms to advance the siting of new transmission lines. Some involve thinking differently about specific decisions such as determining resource adequacy in a specific region.

We acknowledge this and other outstanding work being done by scholars who have studied grid governance.¹⁴² Still, we believe this discussion could go considerably further than it currently does. *Grid Reliability* and other articles largely assume that this byzantine distribution of institutions, markets, and regulators will continue as is. For example, *Grid Reliability* discusses principles for reforming regional electricity energy and capacity markets, but does not discuss whether some markets might be better off ending. Consider its proposal for more “boundary organizations” that straddle multiple silos.¹⁴³ This and other proposals contemplate new ways for working within the system, changing rules governing those entities so that clean energy goals will be easier to reach.¹⁴⁴ This sort of change could be enormously valuable. But we believe rebuilding should also be part of the conversation.

II. GOOD ENDINGS

To end incrementalism in grid governance, we identify three conditions—“red flags”—that should prompt decision-makers to consider terminating current governance structures, and creating new institutions, markets, or entities. We label these red flags as administrative dysfunction, utility indifference for the common

140. *Id.* at 1005.

141. *Id.* at 979.

142. *Supra* note 6 and accompanying text.

143. Klass et al., *supra* note 6, at 1055–56.

144. *Id.* at 969.

good, and incapacity. We define administrative dysfunction as repeated and successive ineffective attempts to improve the performance of a market, a vector of regulatory oversight, or a stakeholder governance process that has proven ineffective, requiring a series of reforms to correct it. Utility indifference focuses on governance structures and program implementation that enshrine incentives for utilities to overspend on capital infrastructure and earn high returns on that invested capital, reaping outsized profits from those investments and harming consumer welfare.¹⁴⁵ By “incapacity,” we mean those situations where actors and regulators have shown themselves to be incapable of addressing pressing issues, the most obvious being utilities’ failures to address climate change in their planning and building for the future.

A. Administrative Dysfunction

While continued regulatory tinkering can demonstrate agility, sometimes it would be better to conclude that progress is either not forthcoming or is doing so at a rate that will not lead to measurable near-term advances. At that point, it should be apparent to stakeholders that they will not be able to get where they want to go from where they are now. To be blunt, at that point, this flag has been raised.

1. Capacity Markets and the MOPR

An example of administrative dysfunction is the ongoing saga involving the PJM capacity market and the MOPR.¹⁴⁶ The PJM capacity market was designed to ensure that adequate generation resources would be on standby to serve regional needs at the

145. For example, Georgia Power may end up making \$12.6 billion in profits (rather than \$7.4B) from the two new nuclear reactors at Vogtle due to budget overruns. Matt Kempner, *Nuclear Cost Overrun Could Mean Billions in Extra Georgia Power Profit*, ATL. J.-CONST. (July 9, 2021), <https://www.ajc.com/news/business/nuclear-cost-overrun-could-mean-billions-in-extra-georgia-power-profit/YIA3T3YHZRH15A7GCZHREIXCPE/>.

146. Sarah Ladin, *What’s a Reasonable Investor to Expect? MOPR Instability and State Policy Certainty*, UTIL. DIVE (Sept. 17, 2021), <https://www.utilitydive.com/news/whats-a-reasonable-investor-to-expect-mopr-instability-and-state-policy-c/606759/> (noting that “PJM on July 30 proposed to meaningfully revise the rules governing participation in its capacity market for at least the 7th time in 15 years.”).

lowest cost.¹⁴⁷ At the outset, the MOPR only applied to new natural gas plants.¹⁴⁸ However, some generators felt they faced unfair competition from generation resources receiving what they termed “state subsidies.”¹⁴⁹ According to them, these subsidies allowed other resources to submit lower bids in the capacity market, allowing their bids to prevail and be compensated accordingly.¹⁵⁰

To address the perceived inequality, PJM submitted a proposal to FERC that incorporated a somewhat narrow framing of state subsidy. FERC went further, expanding a broad MOPR with few exceptions. It agreed with existing natural gas generators that a wide range of support programs for clean energy resources constituted subsidies and that market rule changes were needed to combat anti-competitive state behavior.¹⁵¹ As we have noted, some states found this unworkable and started to consider whether leaving the capacity markets altogether might be a better option.¹⁵² This was especially pronounced for states with significant clean energy goals, as it would be substantially more expensive for their citizens to meet those goals with the MOPR in place. Even with

147. Joseph E. Bowring, *The Evolution of the PJM Capacity Market: Does It Address the Revenue Sufficiency Problem?*, in *EVOLUTION OF GLOBAL ELECTRICITY MARKETS* 227, 227–64 (Fereidoon P. Sioshansi ed., 2013) (PJM’s Independent Market Monitor explains the history and purpose of the PJM capacity market).

148. Ladin, *supra* note 146 (noting that early versions of MOPR had exceptions for all nuclear, hydro, solar, and wind as well as state-supported resources).

149. Joshua C. Macey & Robert Ward, *MOPR Madness*, 42 *ENERGY L.J.* 67, 87 (2021); Cullenward & Welton, *supra* note 53, at 111–12 (subsidies for clean energy sources include tax credits, renewable portfolio standards, and support programs for existing nuclear plants); Eisen, *The New (Clear?) Electricity Federalism*, *supra* note 8 (discussing nuclear plant subsidies).

150. Macey & Ward, *supra* note 149, at 88.

151. *Calpine Corp. v. PJM Interconnection, L.L.C.*, 169 FERC ¶ 61,239 (2019); Macey & Ward, *supra* note 149, at 89–90 (discussing the broad definition of subsidy in the FERC Order); Sonal Patel, *The Significance of FERC’s Recent PJM MOPR Order Explained*, *POWER MAG.*, Dec. 26, 2019.

152. New Jersey, Maryland, and three other states studied a potential exit from the market. *Supra* note 60 and accompanying text; KATHLEEN SPEES, TRAVIS CARLESS, WALTER GRAF, SAM NEWELL, LILY MWALENGA, SEAN CHEW, FREDERICK CORPUZ & KATHRYN PETERS, BRATTLE, *ALTERNATIVE RESOURCE ADEQUACY STRUCTURES FOR MARYLAND* (2021); Jeff Beattie, *Five PJM States Suggest FERC Order Could Prompt Exit From Regional Market*, *IHS MARKIT* (Jan. 30, 2020), <https://ihsmarkit.com/research-analysis/five-pjm-states-suggest-ferc-order-could-prompt-exit.html> (last visited Feb. 3, 2023).

FERC's clarifications, states were unmoved in condemning the MOPR's unnecessary expansion.¹⁵³

Understanding this tension, PJM attempted to broker a cease fire. It would set a price floor, as required by the FERC rule, but it would allow exemptions for specific units that could meet certain financial requirements.¹⁵⁴ This allowed the much-delayed capacity auction for the 2022–2023 year to occur.¹⁵⁵ However, PJM and the new FERC leadership understood that this detente would necessarily be short-lived. Without assurances that large swaths of new renewable generation (such as offshore wind) would not need to be essentially paid for twice by citizens, states might still view leaving the organized capacity markets as a better choice.¹⁵⁶

After thousands of pages of filings, hundreds of hours of meetings, and more regulatory turmoil (which now spans much of the past decade and a half), PJM proposed a much narrower MOPR, applying only to resources receiving direct guaranteed monetary subsidies¹⁵⁷ and enshrining the current definitions of subsidy from the Supreme Court decision in *Hughes v. Talen Energy Marketing*.¹⁵⁸

153. Jeff St. John, *How FERC's New Ruling Is Upending the Country's Biggest Capacity Market*, GREENTECH MEDIA (July 3, 2018), <https://www.greentechmedia.com/articles/read/how-fercs-new-ruling-is-upending-the-countrys-biggest-capacity-market>.

154. *Calpine Corp. v. PJM Interconnection, L.L.C.*, 173 FERC ¶ 61,061 (2020); Michael Yoder & Rich Heidorn Jr., *FERC Acts on PJM MOPR Filing*, RTO INSIDER (Oct 15, 2020), <https://www.rtoinsider.com/articles/19403-ferc-acts-on-pjm-mopr-filing>.

155. *2022/2023 RPM Base Residual Auction Results*, PJM, <https://www.pjm.com/-/media/markets-ops/rpm/rpm-auction-info/2022-2023/2022-2023-base-residual-auction-report.ashx> (last visited Mar. 9, 2023).

156. The zero-carbon resources would be paid for twice. Consumers in states with clean energy policy goals would pay for the resources to be deployed, and would also pay for capacity that cleared the capacity auction. However, that capacity would be primarily fossil-fuel based, as it would be the cheapest because many cleaner generation resources would be subject to the MOPR, their prices raised, and not clear. So, consumers would pay millions of dollars in capacity payments to fossil-fuel generators that would not even be producing electricity much of the time. Kathryn Cleary, *What the Minimum Offer Price Rule (MOPR) Means for Clean Energy in PJM*, RESOURCES (Jan. 21, 2020), <https://www.resources.org/common-resources/what-minimum-offer-price-rule-mopr-means-clean-energy-pjm/>.

157. Proposed Revisions to Application of minimum Offer Price Rule, PJM Interconnection L.L.C., No. ER21-2582-000 (FERC July 30, 2021); Ladin, *supra* note 156.

158. *Hughes v. Talen Energy Mktg.*, 578 U.S. 150 (2016); Christiansen & Macey, *supra* note 8 (discussing the decision and implications for permissible state subsidies); Eisen, *Dual Electricity Federalism Is Dead, But How Dead, and What Replaces It?*, *supra* note 8. *But see* Protest of the Independent Market Monitor for PJM at 5, PJM Interconnection, L.L.C., No. ER21-2582-000 (FERC Aug. 20, 2021) (claiming that "PJM's definition does not actually match the courts' definition of a preempted state program.").

At a divided FERC, the revised MOPR went into effect, seemingly enabling states more freedom to pursue clean energy goals.¹⁵⁹ Because this restraint would exist even without a MOPR rule, changing MOPR to limit it in this fashion ensures it is merely a redundancy. Under the new MOPR, some renewable electricity generators have “cleared” (that is, submitted successful bids) in the capacity market, but others will not if their cost structures—without environmental values factored in—put them above the clearing price.¹⁶⁰

Continued tinkering with capacity market pricing rules is likely. States will probably be loath to continue paying for any unused fossil capacity as well as paying for renewable deployment. This MOPR iteration also does not address other issues with demand response, storage, and aggregation that are also likely to come up in the near future. It is also possible that fossil generators would be as dissatisfied with the current incarnation as they were previously, leading to another iteration of MOPR mischief.¹⁶¹ Rather than continuing, it may be better to end this merry-go-round.¹⁶²

2. Performance-Based Ratemaking

Another example of where we believe administrative dysfunction is present is at the state level. Performance-based ratemaking (PBR) is incentive-based regulation that gives a utility an incentive to do something it would ordinarily not do. PBR theoretically

159. Notice of Filing Taking Effect by Operation of Law, PJM Interconnection, L.L.C., No. No. ER21-2582-000 (FERC Sept. 29, 2021). Pursuant to section 205(g) of the Federal Power Act, a tariff filing on which FERC reaches a deadlock without an “order accepting or denying the change” is deemed accepted by operation of law. 16 U.S.C. § 824d(g)(1).

160. In the most recent auction, some renewable resources did clear. *PJM Successfully Clears Capacity Auction to Ensure Reliable Electricity Supplies*, PJM INSIDE LINES (June 2, 2021), <https://insidelines.pjm.com/pjm-successfully-clears-capacity-auction-to-ensure-reliable-electricity-supplies/>.

161. Casey Roberts, *Clean Energy Gets a Fresh Start in PJM, Saving Customers Billions of Dollars*, SIERRA CLUB (Oct. 14, 2021), <https://www.sierraclub.org/articles/2021/10/clean-energy-gets-fresh-start-pjm-saving-customers-billions-dollars> (noting that “[g]as developers are almost certain to challenge this latest development in court, as many of them rely heavily upon capacity market revenues to provide returns for their investors”).

162. We are not the only ones to suggest ending the MOPR instead of continuing to revise it endlessly. Protest of the Independent Market Monitor, *supra* note 158, at 1 (observing that “[t]he PJM markets would be better off, more competitive, and more efficient with no MOPR than with PJM’s proposed approach.”).

harmonizes two things which are not naturally aligned: the utility's financial motives and the customers' best interests.¹⁶³ To do so, the metrics used to determine whether the utility earns additional profit must be designed perfectly, or PBR can instead give added incentives to utilities to overspend on the wrong things.¹⁶⁴ This is completely logical: a utility will work to maximize profit. However, metrics are rarely perfect, and there are unintended consequences to everything. This tends to make PBR an iterative process, with the utility attempting to get ever more financial reward for doing what it should be doing anyway.¹⁶⁵ PBR is the poster child for administrative dysfunction, as the repeated and successive attempts to improve regulatory oversight, requiring more reforms to correct them, are inevitable. And yet, utilities are pushing more states to adopt PBR,¹⁶⁶ in part because it gives them the ability to constantly reshape acceptable targets and therefore demand rewards for what regulators could just order them to achieve.¹⁶⁷

163. Roberts, *supra* note 76.

164. DAN CROSS-CALL, RACHEL GOLD, LEIA GUCCIONE MIKE HENCHEN & VIRGINIA LACY, ROCKY MTN. INST., REIMAGINING THE UTILITY: EVOLVING THE FUNCTIONS AND BUSINESS MODEL OF UTILITIES TO ACHIEVE A LOW-CARBON GRID 22–23 (2018) (discussing the various forms of PBR designs and noting that they must be designed properly to avoid “perverse incentives”); see also Herman K. Trabish, *Performance-Based Regulation: Seeking the New Utility Business Model*, UTIL. DIVE (July 23, 2019) (quoting Karl Rabago, Executive Director, Pace Center for Energy and Climate: “A bad reason is using PBR to allow a utility extra earnings while making it seem it is being held accountable for performance”), <https://www.utilitydive.com/news/performance-based-regulation-seeking-the-new-utility-business-model/557934/>; Bentham Paulos, *How Should We Structure Performance-Based Regulation of Utilities?*, GREENTECH MEDIA (Mar. 28, 2016), <https://www.greentechmedia.com/articles/read/structuring-utility-performance-based-regulation> (noting that, “If [PBR incentives] are too rich, profits will rise at the expense of consumers”). PBR is often accompanied by multi-year rate plans (MRPs). This, too, can give utilities incentives to overspend. MARK N. LOWRY, M. MAKOS, J. DEASON & L. SCHWARTZ, LAWRENCE BERKELEY NAT'L LAB'Y, STATE PERFORMANCE-BASED REGULATION USING MULTIYEAR RATE PLANS FOR U.S. ELECTRIC UTILITIES iv (2017) (noting that, “MRPs can invite strategic behavior and controversies over plan design”).

165. Maggie Shober, *North Carolina's HB 951: Improved but Still Problematic*, CLEANENERGY.ORG (Oct. 7, 2021), <https://cleanenergy.org/blog/north-carolinas-hb-951-improved-but-still-problematic/> (criticizing PBR incentives in North Carolina's HB 951). Decoupling, mentioned in section I.A.2, can be thought of as one form of PBR and has the same issues. Mark Newton Lowry, *4 Common Myths About Performance-Based Regulation*, UTIL. DIVE (Apr. 27, 2021), <https://www.utilitydive.com/news/4-common-myths-about-performance-based-regulation/598007/> (discussing decoupling as a PBR approach).

166. Lowry, *supra* note 165.

167. *Id.*

3. *Stranded Assets*

A third—albeit slightly different—example of administrative dysfunction is the treatment of the stranded assets that remain when coal-fired power plants are shut down. Some states attempted to address this potential problem through restructuring—by not having their monopoly utilities own generating assets.¹⁶⁸ But where monopoly utilities still own generation, the question then has become what to do with those assets. Utilities, unsurprisingly, would like to run these plants as much as possible,¹⁶⁹ costing utility customers extra hundreds of millions of dollars, for example when they are “self-scheduled” and run cost-ineffectively.¹⁷⁰ This has required regulators to attempt to determine if new rules are necessary for when utilities should be allowed to self-schedule and when they must procure cheaper electricity from the market for the good of their paying customers.¹⁷¹

Even with some limited financial pressure, a utility is unlikely to be willing to shut down a plant that is fully operational, meets its needs for generation, and yields a profit. Utilities have worked tirelessly to broaden the definition of routine maintenance under the Clean Air Act, as partaking in those activities would not require more pollution controls but would allow the utility to operate the

168. BORENSTEIN & BUSHNELL, *supra* note 107, at 6.

169. Susan Cosier, *Electric Utilities, Long Anchored by Coal, Are Starting to Break for Renewables*, AUDUBON (July 21, 2021), <https://www.audubon.org/news/electric-utilities-long-anchored-coal-are-starting-break-renewables> (noting that, “Utilities don’t want to be stuck with what are called ‘stranded assets’ if they retire their fossil-fuel plants early”). See also Emily Grubert, *Fossil Electricity Retirement Deadlines for a Just Transition*, 370 SCIENCE 1171, 1172 (2020) (model showing that 2035 decarbonization deadline would only strand 15% of fossil fuel plant capacity years).

170. “Self-scheduling” refers to wholesale market rules that allow utilities to run power plants at their election, regardless of market prices. Noah Garcia, *Top 10 Utility Regulation Trends of 2020*, ADVANCED ENERGY PERSPS. (Dec. 21, 2020), <https://blog.advancedenergyunited.org/top-10-utility-regulation-trends-of-2020>.

171. Sarah Steinberg & Robert Stoddard, *In Indiana, Fighting the Secret Bailout for Coal Plants: ‘Self-Scheduling’*, ADVANCED ENERGY PERSPS. (Sept. 22, 2020), <https://blog.advancedenergyunited.org/in-indiana-fighting-the-secret-bailout-for-coal-plants-self-scheduling> (describing the practice in Indiana and several other states); Direct Testimony of Devi Blick on Behalf of Sierra Club at 6–7, Application of Duke Energy Ind., LLC for Approval of a Change in Its Fuel Cost Adjustment for Elec. Serv., No. 38707-FAC124 (Ind. Util. Regul. Comm’n June 4, 2020) (observing that Duke engaged in “uneconomic self-commitment and operational decisions”).

plant for a significantly longer period of time.¹⁷² This issue has gone back and forth and is now back again (to one-off assessments by EPA), leading to administrative dysfunction in not only the regulatory efforts but also in enforcement.¹⁷³

Once the utility opts to cease generation, it has considerable remaining book value of the asset that is still undepreciated. This has caused multiple rounds of decision-making, with state public utility regulators vacillating across an entire spectrum of outcomes. At one end of the spectrum most beneficial to utilities, regulators allow full recovery of stranded assets plus the utility's regulated rate of return. Another option is to allow capital recovery but without a profit. Yet another option, which has found favor recently, is to use state bonds through securitization to allow the utilities to recoup capital and some profit but not necessarily their full regulated rate of return.¹⁷⁴ Some legislatures are even mandating attempts to sell the plants, in the hopes that different operators will find ways to make them profitable.¹⁷⁵

172. Thomas O. McGarity, *When Strong Enforcement Works Better Than Weak Regulation: The EPA/DOJ New Source Review Enforcement Initiative*, 72 MD. L. REV. 1204, 1219 (2013) (claiming that, "It would be hard to find a better example of the minimal compliance strategy in action.").

173. *Id.* at 1227-74 (discussing the twists and turns of CAA enforcement on these issues over numerous years and through several Presidential administrations).

174. Ted Jackson, *Power Up: Utility-Fee Securitization is Making a Return*, ASSET SECURITIZATION REP. (Mar. 4, 2021), <https://asreport.americanbanker.com/news/power-up-utility-fee-securitization-is-making-a-return>; Herman K. Trabish, *Possible Hundreds of Billions in US Power Sector Securitizations Spur Ratepayer Protection Debate*, UTIL. DIVE (Feb. 22, 2021), <https://www.utilitydive.com/news/possible-hundreds-of-billions-in-us-power-plant-securitizations-spur-ratepa/595089/>.

175. Gavin Bade, *Wyoming Passes Coal Support Bill in Spate of Western Action to Save Ailing Plants*, UTIL. DIVE (Mar. 11, 2019), <https://www.utilitydive.com/news/wyoming-passes-coal-support-bill-in-spate-of-western-action-to-save-ailing/549753/> (discussing Wyoming law which "direct[s] utilities to attempt to find new buyers for coal plants before retiring them and proposing replacement generation" and similar efforts in Montana and New Mexico). Of course, utilities and their allies have also convinced state legislatures to pass or contemplate bills designed to protect fossil fuel plants against market forces that would prompt their retirement. Ewelina Czapla, *Examining Policies That Preserve Coal in the Generation Mix*, AM. ACTION F. (June 10, 2021), <https://www.americanactionforum.org/insight/examining-policies-that-preserve-coal-in-the-generation-mix/> (last visited Feb. 3, 2023); David Roberts, *Ohio Just Passed the Worst Energy Bill of the 21st Century*, VOX.COM (July 27, 2019), <https://www.vox.com/energy-and-environment/2019/7/27/8910804/ohio-gop-nuclear-coal-plants-renewables-efficiency-hb6>.

4. Dysfunction Commonalities

We note some common features in all three of these examples. The proposals to “fix” the capacity market aimed only to reform the MOPR. There was no suggestion that consumers and society as a whole might be better off by moving on from the capacity market entirely. In our second example, PBR merely attempts to change a utility’s profit motive. It accepts the utility ratemaking process as a given, tinkering only with specific activities for which the utility receives incentives. And allowing utilities to recover for stranded costs associated with coal plants addresses a narrow set of issues: whether the utility will be profitable without these power plants, without further consideration given to impacts on the utility’s portfolio of generation assets or how this could hamper the progress toward the utility relying on more renewable electricity.

At the core of each of these examples is the notion that repeated and successive attempts to improve the quality of regulation have backfired with more iterations required to correct the issues. While the circumstances of each situation are different, combinations of most of the following factors characterize these types of situations as administrative dysfunctions. First, the passage of a significant period of time without addressing the underlying issues, combined with a high number of iterative attempts. Second, the narrow scope of reform proposals in ambition, especially in that most aim only at the perceived problem at hand. The inability at present to achieve rapid, deep decarbonization demands more, and should prompt consideration of other solutions that increase the deployment of renewable energy throughout the grid. Third, the repetitive nature of the proposals, with essentially similar proposals advanced throughout the process until the most recent one broke a stalemate. And finally, as we discuss below in Part III, if solutions, no matter their content, are advanced without broad participation, they are suspect.

We paint with a broad brush here, as we do not think of these as hard and fast benchmarks for whether administrative dysfunction is present. Instead, we aim to provide guidance to the stakeholders involved in these or any other situations that we have identified as candidates for rebuilding. If a significant number of these benchmarks are present, actors may want to seek a new and different course of action. Whether any is present is obviously in the eye of the beholder, as different entities may view each of

them differently. A utility may well be satisfied with how PBR has affected its bottom line; a consumer watchdog may find the payout odious. To those who would therefore say our criteria for dysfunction are subjective, we note that we have chosen examples where a broad spectrum of stakeholders agrees that the current course of policy action is problematic, and we find that rough consensus to be important.

B. Utility Indifference to the Common Good

A second red flag that should prompt consideration of rebuilding is utility indifference to the common good. Monopoly utilities must serve the public interest, and yet abundant scholarship has demonstrated that they so often focus on self-protectionism instead.¹⁷⁶ Incentives for utilities to overspend on capital infrastructure and earn high returns on that invested capital abound.¹⁷⁷ Overspending (and reaping outsized profits from that investment) directly hurts consumer welfare,¹⁷⁸ puts a priority on fossil fuel generation, yields more carbon emissions and slows the transition to more clean energy.

Utility indifference for the common good is a red flag for continuing current governance structures, even if some might

176. See, e.g., Scott Hempling, "Regulatory Capture": Sources and Solutions, 1 EMORY CORP. GOVERNANCE & ACCOUNTABILITY REV. 23 (2014) (discussing regulatory capture as an issue of PUC's misguidedly requiring balancing utility self-interest vs. public interest); Werner Troesken, *Regime Change and Corruption: A History of Public Utility Regulation, in CORRUPTION AND REFORM: LESSONS FROM AMERICA'S ECONOMIC HISTORY* 260 (Edward L. Glaeser & Claudia Goldin eds., 2006), <https://www.nber.org/system/files/chapters/c9986/c9986.pdf> (arguing entrenched utility interests take more of society's resources over time, requiring changes in governance, and that "corruption is endemic to public utility industries; corruption exists, in some form, across all regulatory and ownership regimes").

177. See, e.g., Janet Wilson, *Electric Companies Overspend by Billions, Driving Up Utility Bills, Report Finds*, USA TODAY (Feb. 18, 2019), <https://www.usatoday.com/story/news/2019/02/19/saving-money-electric-companies-overspend-billions-report-finds/2882656002/>.

178. In one case in 2021, the Maine utility, Avangrid, was accused of racketeering as "executives there conspired with contractors to make overpriced and unnecessary purchases that padded profits at ratepayers' expense." Annie Ropeik, *Gov. Mills 'Troubled' by Claim that Avangrid Conspired to Inflate Profits; CMP Owner Denies in Countersuit*, SPECTRUM NEWS (Dec. 6, 2021), <https://spectrumlocalnews.com/me/maine/news/2021/12/06/maine-troubled-by-racketeering-case-against-cmp-owner>.

While not the focus of this Article, both of us have written on how utilities' spending decisions negatively impact consumers' energy burdens. Eisen, *COVID-19 and Energy Justice*, *supra* note 12); Payne, *supra* note 16.

argue keeping the status quo works and is preferable to alternatives. Upon closer inspection, even if it works to some degree for other stakeholders, this is not a sufficient reason to maintain current governance structures that prefer utilities. A good example is incumbent utilities' continued insistence that they develop transmission in their service territories.¹⁷⁹ From an engineering standpoint, there is no reason why merchant transmission could not be built. However, incumbent utilities ask for and receive rights of first refusal and other protectionist measures, allowing them the opportunity to earn a monopoly regulated rate of return for investments when others may have been willing to take lower profits and save ratepayers money.¹⁸⁰ Therefore, transmission development continues to be dominated by utilities building new transmission within their own territory.¹⁸¹ Does that serve the common good? Not enough, given the need for transmission lines to link regional grids and reduce constraints across the grid.¹⁸² In summary, utilities are focused on making

179. The various ways in which incumbent utilities do this are ably summarized in Ari Peskoe, *Is the Utility Transmission Syndicate Forever?*, 42 ENERGY L.J. 1, 32-34 (2021).

180. *Id.* at 61-63 (describing Minnesota's right of first refusal law and an Illinois Commerce Commission decision barring merchant transmission efforts for a firm that was not a "public utility" under state law). See also Miranda Willson, 'Elephant in the Room': FERC Grid Plan Fuels Landowner Fight, ENERGYWIRE (Dec. 1, 2021), <https://subscriber.politicopro.com/article/eenews/2021/12/01/elephant-in-the-room-ferc-grid-plan-fuels-landowner-fight-283732> (noting the EEI has "doubled down" on its argument that ROFRs are necessary for new transmission to be built).

181. Willson, *supra* note 180. As we note above in Part I, and as other scholars have demonstrated, regional transmission lines have largely not been built, in part because each state needs to grant approval for the use of eminent domain along the route and agree to cost allocation for the line. As a result, utilities focus on in-state transmission lines within their own territories, which gain approval and cost allocation more easily. FERC's efforts to spur regional transmission are a perfect example of administrative dysfunction. *Supra* notes 46-47 and accompanying text; Peskoe, *supra* note 179 (proposing numerous reforms to the process).

182. Peskoe, *supra* note 179 at 31 (noting "[l]ines built to connect to areas with high wind or solar potential can unlock energy resources that meet state renewable energy mandates or federal air quality requirements"); NAT'L RENEWABLE ENERGY LAB'Y, INTERCONNECTIONS SEAMS STUDY, <https://www.nrel.gov/analysis/seams.html> (last visited Mar. 4, 2023) (finding numerous benefits of power transfer from East to West).

The continuing constraints on transmission allow generators of electricity (including utilities) to earn more at peak times than they otherwise would. Roberts, *supra* note 2 ("And those entities, more often than not, make most of their money during a few hours of the year when there's a real congestion situation. Electric markets are actually extremely efficient most of the time, which means that it's really hard to make a profit most of the time. And

the greatest profits for themselves from individual transmission projects, demonstrating indifference to the common good.¹⁸³ The issues raised by Hurricane Ida, where restoration of utility service took a long time due in part to transmission constraints, make this issue even more clear.¹⁸⁴

Another example of utility indifference of the common good is the rate base treatment of new generation in service territories of vertically-integrated utilities. There is no fundamental need to allow only incumbent utilities to develop new generation projects and have the invested amounts added to their rate bases. This is especially true given that new development less often consists of building new fossil fuel-powered central generation plants. As offshore wind development in the Northeast, utility-scale solar projects in North and South Carolina, and distributed energy resources everywhere have demonstrated, private capital is readily available to develop these projects.¹⁸⁵ The only reason for utilities to dominate this is to pad their own pockets.¹⁸⁶

when you get congestion on nodes, that's where the big money comes in. And so they have a very strong economic disinterest in market efficiency. So historically, that has made it really hard to connect transmission that would have the practical effect of taking excess generation out of one part of the grid that's got too much load and moving it to a place that's congested.”).

183. An excellent example of this is illustrated vividly in the Union of Concerned Scientists (UCS) comment on FERC's Advanced Notice of Proposed Rulemaking (ANPR), which preceded the FERC Transmission NOPR, *supra* note 47. UCS notes that “[p]ractices of the transmission companies in the [regional] planning process hide opportunities for more economic alternatives that would provide potentially lower rates.” Union of Concerned Scientists, Comment Letter on Proposed Rule for Building for the Future Through Electric Regional Transmission Planning and Cost Allocation and Generator Interconnection, at 2425 (Oct. 12, 2021). It observes, for example, that the Columbus, Ohio-based utility American Electric Power deliberately presented specific transmission upgrades to avoid their consideration within the PJM planning process. *Id.*

184. Douglas MacMillan & Beth Reinhard, *Louisiana Power Outages Renew Questions About Utility Giant's Preparedness for Storms*, WASH. POST (Aug. 31, 2021), <https://www.washingtonpost.com/business/2021/08/31/ida-entergy-hurricane-louisiana-power/>.

185. JOEL B. EISEN, ADVANCED INTRODUCTION TO LAW AND RENEWABLE ENERGY, ch. 6 (2021) [hereinafter EISEN, ADVANCED INTRODUCTION TO LAW AND RENEWABLE ENERGY] (discussing the numerous private sector means for financing clean energy projects); Felix Mormann, *Beyond Tax Credits: Smarter Tax Policy for a Cleaner, More Democratic Energy Future*, 31 YALE J. REGUL. 303 (2014) (discussing the role of tax policies in renewable energy project finance).

186. *Supra* note 94 and accompanying text.

Private capital is consistently cheaper than rate-based capital, because a specific profit is not guaranteed, which it is for the utility.¹⁸⁷ Therefore, acting in the common good would require that any new required generation assets be procured at lowest cost¹⁸⁸ through all-source procurements open to merchant generators as well as distributed energy resources and DER aggregators. This is not a profound observation. But how much incumbent utilities fight to preclude that is telling.¹⁸⁹ Given an average rate of return of about ten percent, regulators should actually approve private capital up to 110% of what the utility would like to add to rate base.¹⁹⁰ If someone else can provide that good or service for less than 110% of what the utility is saying it will cost, then the non-utility party should be given the opportunity to provide that good or service.¹⁹¹

The disconnect between regulated retail rates and wholesale markets exacerbates utility indifference to the common good. Regulated retail rates are driven not by underlying supply and outcomes in the wholesale markets, but by what utilities can convince their regulators to agree to, especially capital investments.¹⁹²

187. Payne, *Private (Utility) Regulators*, *supra* note 11, at 1018–25. Because utility rates of return increase as capital becomes more expensive, utilities have an incentive to drive up the cost of capital as long as allowable rates of return exceed capital costs. WILSON ET AL., *supra* note 64, at 14.

188. This was a major goal of utility restructuring. JAMES BUSHNELL ET AL., REVIEW OF THE ECONOMICS LITERATURE ON US ELECTRICITY RESTRUCTURING 32–34 (2017). The wisdom of competition in generation has been demonstrated by costs that have decreased substantially over the last twenty years, although exogenous factors such as plummeting natural gas prices are also somewhat responsible. BORENSTEIN & BUSHNELL, *supra* note 107, at 13–14.

189. In North Carolina, for example, the battle over HB 951 shows how utilities resist change, as an earlier version of the bill would have allowed Duke to replace some coal plants with natural gas generators, taking decision-making about whether that was prudent away from the NCUC. Tait, *supra* note 78. The potential stakes are high, as constructing new natural gas plants now could “lock in” greenhouse gas emissions for many years to come. Heather Payne, *The Natural Gas Paradox: Shutting Down a System Designed to Operate Forever*, 80 MD. L. REV. 693 (2021); Christopher Serkin & Michael P. Vandenberg, *Prospective Grandfathering: Anticipating the Energy Transition Problem*, 102 MINN. L. REV. 1019 (2018).

190. Potential savings through private ownership of new renewable assets in one state alone (North Carolina) could total \$590 million in 2030 and \$1,200 million in 2035 if utility ownership was cut from 100% of those new assets to 30%. MICHAEL HAGERTY, METIN CELEBI, MATT WITKIN, JULIA OLSZEWSKI & FREDERICK CORPUZ, BRATTLE, A PATHWAY TO DECARBONIZATION: GENERATION COST & EMISSIONS IMPACT OF PROPOSED NC ENERGY LEGISLATION (2021).

191. *Id.*; see also WILSON ET AL., *supra* note 64 (arguing for all-source procurement to lower costs).

192. Payne, *Game Over*, *supra* note 75, at 76.

The focus on capital investment—and increasing rate base to the greatest extent possible—demonstrates a callous disregard for utility ratepayers.¹⁹³

Of course, this utility indifference to the common good did not appear solely through utilities' actions. Regulators have enabled it with metrics they use to measure utility performance. Safe, affordable, and reliable is the common rallying cry. This common phrase—trotted out by utilities anytime their actions are questioned—allows utilities to hide their real intentions.¹⁹⁴ Over time, however, it has become clear that what is not part of that mantra may be more important: for example, environmentally conscious, nondiscriminatory, and non-threatening to individual homeowners and properties.¹⁹⁵

Finally, utility indifference to the common good was amply demonstrated during the pandemic. Obeying stay-at-home orders, working and schooling from home, social activities moved

193. *Id.* at 86 (demonstrating that utilities ask for more than needed and are happy with what they get even when it is half of what they ask for).

194. Dominion obfuscates about how Texas-style deregulation in Virginia (which no one has proposed) would jeopardize safe, reliable, and affordable electricity in the state. Ben Paviour, *Dominion Energy-Linked Group Launches \$300K Ad Blitz After Texas Storm*, VPM NEWS (May 14, 2021), <https://vpm.org/news/articles/22344/dominion-energy-linked-group-launches-300k-ad-blitz-after-texas-storm> (last visited Mar. 4, 2023). A Duke front group campaigns in North Carolina against competition, arguing the same. EWG, *Duke Energy-Backed Group Deploys Attack Ad Campaigns Against Electricity Competition Proposal in North Carolina* (June 4, 2021), <https://www.ewg.org/news-insights/news-release/duke-energy-backed-group-deploys-attack-ad-campaign-against-electricity> (last visited Mar. 4, 2023). Finally, Florida Power and Light campaigned against distributed solar in Florida, also claiming that reliability and affordability would be impacted if net metering policies increased the amount of distributed solar in the state. Bryn Huxley-Reicher, *Florida Power & Light, Duke Energy and Tampa Electric Company Fight Pro-Solar Policies*, ENV'T AMERICA (July 2, 2021), <https://environmentamerica.org/blogs/environment-america-blog/ame/florida-power-light-duke-energy-and-tampa-electric-company-fight> (last visited Mar. 4, 2023). Florida Power and Light is developing a large utility-scale solar farm. Apparently affordability and reliability are not impacted if the utility owns the solar panels, but only if the utility cannot make its regulated rate of return and profit on the capital homeowners individually spend. Kelsey Misbrener, *Florida Public Service Commission Approves Enough Utility-Scale Solar to Power 1 Million Homes*, SOLAR POWER WORLD (Oct. 26, 2021), <https://www.solarpowerworldonline.com/2021/10/florida-public-service-commission-approves-utility-scale-solar-buildout/> (last visited Mar. 4, 2023).

195. Customers have even sued Duke—and won—over their trimming practices. *Residents Voice Concern Over Duke Energy Tree Removal Process*, WRAL NEWS (July 29, 2015), <https://www.wral.com/residents-voice-concern-over-duke-energy-tree-removal-process/14801226/> (last visited Mar. 4, 2023). Given that we should be maintaining as much urban and suburban forest as possible, this demonstrates problematic utility behavior.

online . . . all become nearly impossible without electricity.¹⁹⁶ Millions lost the employment needed to pay their bills, with little or no work to be found in many hard-hit industries.¹⁹⁷ Yet utility shutoffs for non-payment continued unabated, without temporary moratoria in place elsewhere.¹⁹⁸ Utilities demanded either that they be able to continue to remove service and shut off people in the middle of a global pandemic or collected all the amounts they had lost from other ratepayers in the next rate case – even when taking government relief funds.¹⁹⁹ No one proposed that utility shareholders shoulder some of that burden.²⁰⁰ And those who personally profit handsomely from monopoly utilities had no fear of being asked to share in the support of their communities. As one report found: a 32% cut in Southern Company’s CEO’s 2019 compensation could “immediately wipe out the debt of every single Georgia Power customer that was over 90 days in arrears on their bills as of the end of July 2020” and leave Fanning with \$19 million in compensation. Instead, Georgia Power disconnected 13,000 customers, starting when regulators allowed a state moratorium on disconnections to expire on July 14.²⁰¹ The language used can be insightful in this regard, as Dominion stated publicly, “[w]e know its [sic] getting into the winter and holiday season

196. Eisen, *COVID-19 and Energy Justice*, *supra* note 12, at 162.

197. *Id.* The results were striking, as many had to choose between paying utility bills and other necessary expenses. Ind. Univ., Env’t Resilience Inst., Survey of Household Energy Insecurity in Time of COVID, Preliminary Results of Wave-2, and Wave-1 and Wave-2 Combined (Sept. 22, 2020), <https://eri.iu.edu/research/text-alternatives/wave-2-energy-insecurity-in-time-of-covid-text-alternative.html> (last visited Mar. 4, 2023) (noting that 19% of survey respondents “indicated that they had to reduce or forgo expenses for basic household needs, such as medicine or food, to pay an energy bill”).

198. Gas, water, and electric utilities varied in their treatment of customers, and states varied in how they imposed moratoria (and their content), but the temporary moratoria have largely expired although the pandemic continues. Eisen, *COVID-19 and Energy Justice*, *supra* note 12, at 164-67 (discussing the fate of moratoria in the states); NAT’L ASS’N OF REGUL. UTIL. COMM’RS, MAP OF DISCONNECTION MORATORIA, <https://www.naruc.org/compilation-of-covid-19-news-resources/map-of-disconnection-moratoria/> (last visited Mar. 4, 2023).

199. Eisen, *COVID-19 and Energy Justice*, *supra* note 12, at 165.

200. Indeed, the trend was just the opposite, as utilities pressed their PUCs to recover revenue lost during the pandemic. Travis Kavulla, *Will Regulators Allow Utilities to Reap a Windfall Because of COVID-19?*, UTIL. DIVE (June 23, 2020), <https://www.utilitydive.com/news/will-regulators-allow-utilities-to-reap-a-windfall-because-of-covid-19/580279/>.

201. Kelly Roache & David Pomerantz, *Pollution Payday: Analysis of Executive Compensation and Incentives of the Largest U.S. Investor-Owned Utilities*, ENERGY & POL’Y INST. (Sept. 22, 2020), <https://www.energyandpolicy.org/analysis-of-utilities-executive-compensation/> (last visited Mar. 4, 2023) (discussing findings of report on compensation of 19 utility CEOs).

we're trying to be sensitive to that, but there are going to be some folks for one reason or another, struggling financially they have decided they can't pay their bill."²⁰²

Utility indifference is hardly cabined to the state level and the relationship between utilities and state PUCs. Given the recent IPCC report detailing climate change,²⁰³ there is also adequate evidence of indifference to the common good in the MOPR context. Both emissions driving climate change and the cost of electricity have increased due to the actions of those advocating for a more stringent MOPR. The driving force behind many MOPR machinations has been the desire for clean energy to be more expensive, to slow the adoption of carbon-free resources, and to shore up fossil fuel electricity generation. By increasing the costs of renewable generation at the insistence of merchant generators, it demonstrates utility indifference to the common good toward addressing climate change.

These examples more than adequately demonstrate utility indifference to the common good and signal that it is time to end current governance structures and potentially create something new. At some point, trust has been eroded so dramatically that it is simply not able to be regained. In the current scheme, utilities attempt to stymie change of any sort if at all possible. We believe grid governance structures must now evolve.

C. Incapacity

Our third red flag is that regulators and the entities they oversee have shown themselves to be incapable of addressing pressing issues. The most obvious example is utilities' failures to address climate change in their planning and building for the future.²⁰⁴

202. Delaney Hall, *Dominion Energy Encourages Customers to Get on Payment Plans, Power Cut-offs Resume Today*, ABC8NEWS (Nov. 29, 2021), <https://www.wric.com/news/local-news/richmond/dominion-energy-encourages-customers-to-get-on-payment-plans-power-cut-offs-resume-monday/>.

203. *Supra* note 20.

204. Brad Plumer & Ivan Penn, *Climate Crisis Catches Power Companies Unprepared*, N.Y. TIMES (July 29, 2021), <https://www.nytimes.com/2021/07/29/climate/electric-utilities-climate-change.html> ("Across the United States, power companies are scrambling to keep up with a barrage of extreme weather from a rapidly warming climate. . . . With rare exceptions, most electricity providers nationwide still don't conduct detailed climate studies that would help them understand all the ways that increased heat, drought, wildfires or flooding can ravage their power grids, researchers have found.").

This has many root causes: investor-owned utilities constantly looking to build new plants burning fossil fuels to increase guaranteed revenue and satisfy investors;²⁰⁵ corporate cultures which heavily favor climate denial;²⁰⁶ misalignment between professed corporate climate goals and executive compensation;²⁰⁷ and a lack of imagination about potential climate impacts.²⁰⁸ Climate change resilience is simply treated as another way to add more investment into the rate base—and therefore earn even more profit.²⁰⁹

The incapacity of utilities to address climate change is inexcusable. But that is hardly the only example of demonstrated incapacity. Another is technological innovation: the use of smart grid tools (collectively known as advanced metering infrastructure or AMI), for example. When pressed by regulators, at least one utility has demonstrated the ability to use AMI for system benefits, and to benefit individual customers.²¹⁰ However, that is the outlier. The majority of utilities lock up AMI data, making it nearly impossible for customers (or others) to use this data to optimize non-utility investments into the system.²¹¹

The other way incapacity connects with AMI is through the customer interface. Investor-owned utilities tend to own their

205. The recent IRP proceedings in North Carolina and South Carolina involving Duke Energy and Dominion Energy, in which both utilities submitted plans to build large numbers of new gas plants and heavily discounted solar and storage, are an example of this. See Scott Van Voorhis, *South Carolina Regulators OK a Dramatically Revamped Dominion IRP*, UTIL. DIVE (June 28, 2021), <https://www.utilitydive.com/news/south-carolina-regulators-ok-a-dramatically-revamped-dominion-irp/602420/> (discussing South Carolina); Jeff St. John, *Duke Energy Faces Challenges to Its Push for New Natural Gas Plants*, GTM GRID EDGE (Mar. 4, 2021), <https://www.greentechmedia.com/articles/read/duke-energy-faces-challenge-to-plan-to-build-new-natural-gas-plants> (discussing North Carolina); *infra* notes 249–256 and accompanying text.

206. Trabish, *supra* note 19.

207. Roache & Pomerantz, *supra* note 201.

208. Plumer & Penn, *supra* note 204.

209. See generally Payne, *Unservice*, *supra* note 11.

210. Herman K. Trabish, *Slowed Pay-Off from Billions in AMI Investment Puts the Technology's Future in Doubt*, UTIL. DIVE (Feb. 20, 2020), <https://www.utilitydive.com/news/slowed-pay-off-from-billions-in-ami-investment-put-the-technologys-future/570274/> (noting utility NV Energy “is one of the few major IOUs working with most of AMI data’s potential”).

211. The authors, and other scholars, have identified this as critical in enabling new applications and other products to use the data. See, e.g., Heather Payne, *Sharing Negawatts: Property Law, Electricity Data, and Facilitating the Energy Sharing Economy*, 123 PENN ST. L. REV. 355 (2019); Alexandra Klass & Elizabeth Wilson, *Remaking Energy: The Critical Role of Energy Consumption Data*, 104 CAL. L. REV. 1095 (2016); Eisen, *Smart Regulation*, *supra* note 55.

customer computer systems – more rate base! Then these computer systems become stale and outdated, in some cases fairly quickly, and the consumer experience degrades quickly over time. Quite simply, investor-owned utilities are not experts in the customer experience and data visualization space. So why should customers pay for them to develop company-specific computer programs which cannot be updated easily and whose features are quickly outdated? By contrast, some publicly-owned utilities are demonstrating how impactful AMI can truly be, if implemented properly. These utilities do not have the same profit motive – they are often just as happy to have a recurring expense as something that is classified as capital, provided it is the right answer for other reasons. They are implementing AMI systems with software-as-a-service (SAAS).²¹² This means that those customers get continually refreshed interfaces, constantly updated behind-the-scenes software, with a group of people who actually are customer experience and data visualization experts running the customer platform.²¹³ Unsurprisingly, the experience is consistently better.

Incapacity is not limited to the state regulatory context of utilities and PUCs. Consider the MOPR context in regional wholesale markets. At present, the MOPR puts restraints on the ability of renewable electricity generators to participate in a market, which in turn makes it impossible to value their environmental and climate benefits adequately. As we noted above in Part II.B, this leads to higher emissions driving climate change and higher electricity costs. The MOPR makes clean energy more expensive, and, even if it is amended as currently proposed, would still result in slower adoption of fossil fuel electricity generation. Some generators, particularly those with high capital costs like offshore wind generators, would still not clear the market at all. To us, this

212. Paul Ciampoli, *Power Sector Explores Ways in Which to Leverage Artificial Intelligence, Machine Learning*, AM. PUB. POWER ASS'N (May 7, 2021), <https://www.publicpower.org/periodical/article/power-sector-explores-ways-which-leverage-artificial-intelligence-machine-learning> (discussing projects of several publicly owned utilities including CPS Energy and Salt River Project).

213. Jeff St. John, *Camus Energy: Grid Software for Small Utilities with Big Clean Energy Ambitions*, CANARY MEDIA (July 20, 2021), <https://www.canarymedia.com/articles/clean-energy/camus-energy-grid-software-for-little-utilities-with-big-clean-energy-ambitions> (discussing a cloud computing startup for integrating renewable generation focused on municipal utilities and electric co-ops rather than large IOUs that earn a profit for building new things, whereas munis and coops are structurally aligned to save money while getting the most out of existing infrastructure).

demonstrates incapacity for attention to changing the generation mix at the speed necessary.

In these current schemes, utilities are winning at the expense of clean energy and progress toward climate goals. We know they can't do better because their actions speak for themselves. They have been given ample opportunity. Whether the incapacity exists due to a lack of imagination or a lack of will is unimportant. In this case, past performance is the best possible indicator of what will happen in the future.

In summary, we note that our three red flags—administrative dysfunction, utility indifference to the common good, and incapacity—are not necessarily mutually exclusive. And while one could be sufficient to start the conversation around ending the institution and rebuilding, the more red flags apparent indicate a higher likelihood that rebuilding should occur, especially if the red flags are not simply at the periphery but go to the heart of the institution. Given that rebuilding will be necessary to meet the goals of the energy transition, we turn now to what is required for that to occur.

III. REBUILDING

In Part II, we focused on indicators that rebuilding of energy governance institutions may be necessary, that is, that a specific institution may need to come to a good ending and possibly be replaced by a new entity. There is nothing new about creating new institutions; ideas surface regularly. Two examples will suffice to illustrate this. The first is utilities, states, and others proposing new markets or other mechanisms for exchanging electricity (for example, the recent proposal by a consortium of utilities to create a Southeast Energy Exchange Market (SEEM)). The second is the advent of a new federal entity: the FERC Office of Public Participation (OPP). While created in statute decades ago, the OPP had never been staffed. It is essentially a new office within FERC, upgraded now because existing institutions were believed to be ineffective for facilitating public input in FERC decision-making.²¹⁴

214. Catherine Morehouse, *FERC's Glick Names Former Ratepayer Advocate to Lead Office of Public Participation*, UTIL. DIVE (June 30, 2021), <https://www.utilitydive.com/news/ferc-just-established-an-office-of-public-participation-why-did-it-take-40/602612/>; Aaron Stemplewicz,

But there has been no holistic look at how institutions must be changed or replaced in the overall context of the grid. Instead, we tend to take a hammer to a nail, repairing a single situation with a single solution. We argue instead that this inquiry must consistently be guided by the benchmarks we develop in this Part. Our theoretical foundation for rebuilding features three overarching principles that must guide any decision about whether a specific entity should stay or go. These are: enshrining resource agnosticism as the central governance principle; fostering more broad-based participation in grid governance; and avoiding or unwinding governance structures that allow grid actors to perpetuate their self-interest, which we term self-centricity. Each of these is discussed more fully below in Part III.A .

Our rebuilding principles respond to the concerns raised in Parts I and II. For example, we have identified utility dominance as a reason to replace a governance structure that utilities can currently control. Focusing on removing this dominance does not necessarily dictate any one particular alternative structure. Numerous types of arrangements could accomplish the goal of establishing a more level playing field, and the multiplicity of current governance structures makes a one-size-fits-all approach difficult. However, only one structure in most cases will embody all of our three principles. In Part IV, we demonstrate this by applying these principles to the specific example of the MOPR and capacity market.

Our three principles are hardly radical. They consciously build on the work of others in academia, governments, and the private sector who have written about the grid, and our own work. We recognize that some limited progress has been made to incorporate them into discussions about the future of the grid. Our innovation is to go further and use them as core principles for making decisions about rebuilding grid governance. This recognizes an essential reality about today's grid: a fundamental disconnect between ideas emerging as best practices for incorporating new resources or managing existing ones on the grid and existing mandates of grid governance institutions that can delay or subvert progress.

Correcting the Power Imbalance: FERC's Office of Public Participation, EARTHJUSTICE (Apr. 20, 2021), <https://earthjustice.org/from-the-experts/2021-august/correcting-the-power-imbalance-fercs-office-of-public-participation>.

Retooling of fundamental governance structures can enshrine these practices in institutions' basic mandates.

Identifying the principles to guide decisions is only half of the equation, as we must address who will (or should) have the authority to make the decisions. The second section of this Part does exactly that: identifying potential decision-makers. Keeping the current structures of grid governance institutions in mind, we conclude that those who dominate current governance structures cannot be responsible for making important decisions. This leads us to conclude that a decision to eliminate all or part of a current governance institution must be made by actors other than those which currently hold a governing majority or other indicia of power in the institution itself. We offer suggestions for how this might be accomplished at the state and federal levels, keeping in mind that the principle of broad-based participation should be built into decision-making.

A. Overriding Principles

This section will elaborate on the overriding principles that should regulate rebuilding of governance structures. Focusing on the desirable values that have been precluded by the current governance structure, we contend that the appropriate remedy in most situations presents itself much more clearly: establishing a new entity that promotes resource agnosticism, reduces utility dominance, and allows for more participation in grid decision-making by a wider range of stakeholders.

1. Resource Agnosticism

We have never had more diversity of resources that generate electricity than we do now. Where the grid was once dominated by coal with smatterings of nuclear, oil, fossil gas, and hydro mixed in, the current grid is supplied by all those plus solar, wind, geothermal, and storage,²¹⁵ with advanced tests occurring around tidal and marine kinetic generation.²¹⁶ Demand response and energy efficiency also play a part in our evolving grid and make the

215. U.S. ENERGY INFO. ADMIN., *What is U.S. Electricity Generation by Energy Source?*, <https://www.eia.gov/tools/faqs/faq.php?id=427&t=3> (last updated Mar. 2023).

216. EISEN, *ADVANCED INTRODUCTION TO LAW AND RENEWABLE ENERGY*, *supra* note 185, at ch. 2.5 (discussing experiments of various technologies in the U.S. and Europe).

transition to a clean energy future cheaper.²¹⁷ Long-duration storage will soon join in making the transition more durable.²¹⁸

This proliferation of resources is often used to attempt to justify keeping polluting sources online.²¹⁹ Unsurprisingly, those polluting sources are typically the ones that either are directly owned by vertically integrated utilities or are most often compensated by capacity markets.²²⁰ This has led to severe criticisms of capacity markets for over-procuring capacity, especially from fossil fuel resources.²²¹ Using excuses to keep polluting assets online goes directly against the principle of resource agnosticism. Resources of all sorts should be eligible to satisfy demand, and should be valued by their contribution to the grid, taking into account all environmental and climate values, not by value as determined in actors' self-interest. This would encourage more clean energy, more cheaply, and would retire polluting assets.

The core of this approach is not new. Most states have least cost mandates, which technically require utilities to procure the

217. Eisen, *Demand Response's Three Generations*, *supra* note 56.

218. Jason Plautz, *Long-Duration Storage Market on the 'Cusp of Maturity': ESS CEO*, UTIL. DIVE (July 29, 2021), <https://www.utilitydive.com/news/long-duration-storage-market-on-the-cusp-of-maturity-ess-ceo/604106/>; Ken Silverstein, *For the U.S. to Become Carbon Neutral, Long Term Energy Storage Is a Must*, FORBES (July 26, 2021), <https://www.forbes.com/sites/kensilverstein/2021/07/26/for-the-us-to-become-carbon-neutral-long-term-energy-storage-is-a-must/>. For a comprehensive assessment of storage's potential, including the role of long-duration storage, see U.S. DEPT. OF ENERGY, ENERGY STORAGE GRAND CHALLENGE: ENERGY STORAGE MARKET REPORT (2020), https://www.energy.gov/sites/default/files/2020/12/f81/Energy%20Storage%20Market%20Report%202020_0.pdf.

219. As one example, utilities and their allies have argued for years that renewable energy is so variable that fossil-fuel plants must be on hand to provide system reliability. See, e.g., EISEN, ADVANCED INTRODUCTION TO LAW AND RENEWABLE ENERGY, *supra* note 185, at ch. 2.1; U.S. DEPT. OF ENERGY, STAFF REPORT TO THE SECRETARY ON ELECTRICITY MARKETS AND RELIABILITY 14 (2017) (criticizing heavily the Department of Energy's report calling for attention to retaining baseload plants); Benjamin K. Sovacool, *The Intermittency of Wind, Solar, and Renewable Electricity Generators: Technical Barrier or Rhetorical Excuse?*, 17 UTIL. POL'Y 288 (2009).

220. David Littell & Michael Hogan, *FERC Points PJM Toward a 21st-Century Reliability Approach*, UTIL. DIVE (June 15, 2021), <https://www.utilitydive.com/news/ferc-points-pjm-toward-a-21st-century-reliability-approach/601805/> (noting that "capacity markets in PJM, ISO-New England and New York ISO have created a multi-billion-dollar annual revenue stream that is especially beneficial for fossil gas plants, and less so for other resources capable of making valuable contributions to reliability"); GRAMLICH, *supra* note 68, at 11 (noting that capacity markets "tend[] to over-procure gas plants").

221. Littell & Hogan, *supra* note 220; Richard Martin, *Overpowered: PJM Market Rules Drive an Era of Oversupply*, S&P GLOB. MKT. INTEL., Dec. 3, 2019.

cheapest electricity.²²² The most cost-effective means of bringing new capacity online are onshore wind, solar and storage, if environmental and climate values are considered – and sometimes even just based on cost.²²³ Recent research and actions have shown that when a regulator requires “all-source procurement,” clean, renewable resources are the cheapest for the customer.²²⁴ Even better, these can often be procured by contract (not built by the utility), so customers do not pay additional profits.²²⁵ Too often, this is not the case. Regulators often allow utilities to determine what capacity needs to be procured²²⁶ without requiring supporting evidence and calculations that incorporate environmental values accurately.

An emerging trend toward resource agnosticism—and a demonstration of how utilities are hampering the process—involves the best practices employed when determining the value of distributed solar. Utilities have attempted to limit the value provided to solar, especially distributed solar that they do not own.²²⁷ Regulators—with utility urging—have often adopted

222. REGUL. ASSISTANCE PROJECT, *supra* note 114, at 73–74 (discussing IRPs and least cost principles).

223. LAZARD, LEVELIZED COST OF ENERGY, LEVELIZED COST OF STORAGE, AND LEVELIZED COST OF HYDROGEN (2021).

224. WILSON ET AL., *supra* note 64 at 1 (describing “shocking” low prices paid for renewable generation in the all-source procurement conducted in Colorado by Xcel Energy).

225. If the utility invests the capital, then customers must pay investors a profit for that capital to be invested. However, if purchased on a contract, private money by the developer is used to deploy the resource, so the utility’s customers do not need to pay additional profit. Whatever profit the developer expects is already baked into the cost of the contract.

226. *Id.* at 14 (explaining biases toward this). For example, a utility might decide a 100 MW natural gas plant is needed for peaking, rather than putting out an RFP to determine the cheapest way to meet specific resource needs (like 100 MW between 4:00 and 9:00 pm). William Driscoll, *Solar Beats Gas When Utilities Use All-Source Procurements*, PV MAG. (Apr. 28, 2020), <https://pv-magazine-usa.com/2020/04/28/solar-beats-gas-when-utilities-use-all-source-procurements/> (last visited Mar. 4, 2023).

227. Advocating for reducing the value of distributed solar, often within the context of scaling back compensation under net metering laws and calling for imposing “demand charges” (minimum fees per month for solar customers) has been a decade-long project for utilities. Dan Gearino, *Inside Clean Energy: The Coast-to-Coast Battle Over Rooftop Solar*, INSIDE CLIMATE NEWS (Apr. 8, 2021), <https://insideclimatenews.org/news/08042021/inside-clean-energy-the-coast-to-coast-battle-over-rooftop-solar/>; Brad Plumer, *Rooftop Solar is Growing So Fast That Electric Utilities Are Now Trying to Slow It Down*, VOX (Sept. 29, 2014), <https://www.vox.com/2014/9/29/6849723/solar-power-net-metering-utilities-fight-states>. See also EISEN, ADVANCED INTRODUCTION TO LAW AND RENEWABLE ENERGY, *supra* note 185, at ch. 5.4 (discussing debates over net metering and demand charges). A wide variety of

avoided cost formulas: hypothetical constructs that are supposed to assess the theoretical cost of wholesale power generation.²²⁸ In theory, this should value solar energy's environmental attributes, compensation for a lack of transmission or distribution line losses, avoided reserve capacity cost, valuation for increased grid resiliency, reduced financial risk, reduced security risk, and others.²²⁹ Yet even where others are heavily involved in the valuation process, the results have been barely workable compromises designed to minimize utility objections.²³⁰

Summarizing this activity, resource agnosticism has only been sporadically accomplished in practice. Much has been written about its benefits for specific RFPs or as part of approaches to valuing clean energy. Some states (but not all) have put robust mechanisms in place for valuing the full contribution of clean energy to the grid. But at most, fair valuation has typically been in one specific context and for one purpose: revising net metering regimes to adopt a "value of solar" approach, for example.

We view resource agnosticism as much more important, and indeed as the core of a central governance principle for the entire electric grid. It should not be pigeonholed in the narrow way that it has been in utility proceedings previously. Instead, we believe it should be central to discussions of every governance process and every individual project and serve as the benchmark against which an existing governance institution is measured. Of course, procurement of specific new resources to meet demand should also

valuation approaches have been studied or used. U.S. DEPT. OF ENERGY, REVIEW OF RECENT COST-BENEFIT STUDIES RELATED TO NET METERING AND DISTRIBUTED SOLAR (2018) (discussing valuation attributes compared in 15 different studies); HEATHER PAYNE & JONAS MONAST, VALUING DISTRIBUTED ENERGY RESOURCES: A COMPARATIVE ANALYSIS (2018) (describing different valuation methods used).

228. Payne & Monast, *supra* note 227.

229. *Id.* (discussing approaches taken by various states). Each of these has been listed as a consideration by at least one state, although some are not assigned a value even when they are supposed to be taken into consideration by regulators.

230. In New York, for example, the overall valuation effort (known as "VDER"), part of its larger REV process, has been recognized as largely successful. *Supra* note 132 and accompanying text. In 2021, however, the PSC continued net metering under VDER but accepted utilities' proposals to impose controversial "customer benefit contribution" charges on ratepayers. N.Y. Pub. Serv. Comm'n, Order Adopting Net Metering Successor Tariff Filings with Modifications, Case No. 15-E-0751 (Aug. 13, 2021); Michael Kuser, *NY Developers, Enviro Oppose New Net Metering Charges*, RTO INSIDER (June 15, 2021), <https://www.rtoinsider.com/articles/28005-ny-developers-enviro-oppose-new-net-metering-charges>.

be evaluated this way. If the institution as currently constituted does not advance this, its process should cease.

This pervasiveness is necessary to address the root concern: the inability of stakeholders to agree how much clean electricity should be on the grid, where it should be located, and how it should be transmitted from one place to another. Without making resource agnosticism central to all decisions, it is unlikely that grid actors will remedy this stagnation. So we insist on a much broader focus to guide all decisions going forward. By this we mean that the value of all supply and demand-side resources, not the value as determined in individual actors' self-interest, should be the paramount energy, environmental, and climate concern of the modern grid. In this paradigm, all resources should be eligible to satisfy demand, and they should be valued by their contribution to the grid.

2. *Broad-Based Participation*

Scholars have observed that public participation in decisions relating to the grid is severely lacking at present.²³¹ There are numerous ways in which it is difficult for laypersons to understand the complex issues involved in this field of law.²³² Even if they did, barriers have been erected for them to participate. The present structures—both governance structures of grid institutions themselves and the means for the public to be involved in decision-making—are wholly anti-democratic, with few opportunities for genuine public involvement.²³³ A frequent challenge is that the benefits of a cleaner, cheaper, and more equitable grid are diffuse, and the interests that would keep the grid from becoming cleaner,

231. See, e.g., Welton, *Rethinking Grid Governance*, *supra* note 6; Payne, *Private (Utility) Regulators*, *supra* note 11, at 1014 (discussing a “general lack of stakeholder engagement in energy regulatory processes”); Heather Payne, *A Long Slog: What a Ten Year Hydroelectric Relicensing Process Demonstrates About Public Participation and Administrative Regulation Theories*, 53 IDAHO L. REV. 41, 50 (2017) (noting citizen monitoring of PUCs “would require significant investments in time, information, and organization, . . .”); Shelley Welton, *Clean Electrification*, 88 U. COLO. L. REV. 571, 589–91 (2017).

232. As but one example, Professor Shelley Welton describes how the complex mechanics of participation in RTO decision-making inhibit public participation. Welton, *Rethinking Grid Governance*, *supra* note 6, at 227–29.

233. Shelley Welton & Joel Eisen, *Clean Energy Justice: Charting an Emerging Agenda*, 43 HARV. ENV'T L. REV. 307, 343–48 (2019) (describing the difficulties of participation in agency deliberations).

cheaper and more equitable are concentrated and therefore have strong interests in maintaining the current system of participation. In FERC proceedings, ordinary citizens, who might pay more for electricity as a result of the decisions being made, are typically not represented at all.²³⁴ Even if they had been afforded the opportunity to participate, FERC proceedings are highly complex and difficult to follow.²³⁵

There is a dramatic paucity of institutional competence to counteract this situation. Relatively few entities have a sufficient knowledge base to advocate for consumers' interests throughout the grid, particularly when it comes to the developments of the past quarter century. In most places, utilities and their allies have a decades-long head start on anyone who would jump into this fray, and they have substantial resources to counteract any citizen participation. Coziness between the regulators and regulated, and bad behavior by utilities to attempt to influence decision-making, is all well documented.²³⁶ Despite all these obstacles, there has been

234. For example, FERC received 172 comments on the transmission Advanced Notice of Proposed Rulemaking (FERC Transmission NOPR, *supra* note 47), none of which were from private citizens that did not represent interested stakeholders. Mathias Einberg (@MattEinberger), Twitter (Oct. 13, 2021 5:35 PM), <https://twitter.com/MattEinberger/status/1448402132231675906?s=20> (last visited Mar. 4, 2023).

235. Morehouse, *supra* note 214 (quoting FERC Chairman Richard Glick's statement that for this reason and others, "There's no doubt there's an inequity" in participation in FERC proceedings).

236. See, e.g., Susan Cosier, *Why Electric Utilities Are Resorting to Dark Money and Bribes to Resist Renewables*, AUDUBON (Mar. 16, 2021), <https://www.audubon.org/news/why-electric-utilities-are-resorting-dark-money-and-bribes-resist-renewables> ("Utilities use dark money, front groups, LLCs, and national interest groups to covertly advance their agendas to maintain the status quo and twist laws in their favor."). For descriptions of specific utilities' actions, see Lee Zurik & Cody Lillich, *Entergy Quiet on its Secret Committee of Paid Citizen Advisors*, FOX8 NEW ORLEANS (Nov. 10, 2021), <https://www.fox8live.com/2021/11/11/zurik-entergy-quiet-its-secret-committee-paid-citizen-advisors/> (describing a utility secretly paying advisory board members); Amanda Durish Cook, *Group Alleges Improper Entergy-Mississippi PSC Collaboration*, RTO INSIDER (Apr. 11, 2021), <https://www.rtoinsider.com/articles/20091-group-alleges-improper-entergy-mississippi-psc-collaboration>; Patrick Wilson, *Four Types of Scandals Utility Companies Get Into With Money From Your Electric Bills*, PROPUBLICA (Oct. 10, 2020), <https://www.propublica.org/article/four-types-of-scandals-utility-companies-get-into-with-money-from-your-electric-bills>. The utility Entergy was involved in a scandal in New Orleans when it was discovered that it paid actors to support its interests at a public meeting. Michael Isaac Stein, *Actors Were Paid to Support Entergy's Power Plant at New Orleans City Council Meetings*, THE LENS (May 4, 2018), https://www.nola.com/news/actors-were-paid-to-support-entergy-s-power-plant-at-new-orleans-city-council-meetings/article_3344391c-2c85-51e7-945f-ce68491b6981.html.

laudable progress so far in developing robust citizen advocacy, especially on behalf of lower income consumers.²³⁷

In some high-profile situations today, the participatory challenges are fairly well-defined and understood: siting transmission lines and identifying transmission corridors, and valuing net metered resources, for example. But in many states, and especially in the RTOs, we are a long way away from robust and effective citizen advocacy across the board. Too often, input comes only from attorneys, and usually from those heavily involved in the energy sector with specific clients' stake in the outcome, or from regulators.²³⁸ Tasking actors with the responsibility to build an entity from whole cloth (or end one) involves even higher stakes for ratepayers. It takes a holistic understanding of the system to understand the limitations of RTO governance and the potential of a bold rebuilding proposal, which requires the development of still more institutional competence. And given the limitations of their

Utilities also have made substantial charitable donations to those who might advocate for other interests, to have them support the utility's preferred options instead. See ENERGY & POL'Y INST., STRINGS ATTACHED: HOW UTILITIES USE CHARITABLE GIVING TO INFLUENCE POLITICS AND INCREASE INVESTOR PROFITS (2019).

237. An example of this is the successful advocacy efforts to secure utility bill relief for low-income ratepayers in Virginia during the pandemic. Eisen, *COVID-19 and Energy Justice*, *supra* note 12. Attention to the issues is growing, as are resources for those who might wish to participate. See, e.g., NAACP, *Engaging With Public Utilities and Public Service Commissions*, <https://naacp.org/resources/engaging-public-utilities-and-public-service-commissions> (last visited Mar. 4, 2023).

238. MARK JAMES, KEVIN B. JONES, ASHLEIGH H. KRICK & RIKAELA R. GREANE, R STREET, HOW THE RTO STAKEHOLDER PROCESS AFFECTS MARKET EFFICIENCY (2017) (detailed examination of stakeholders empowered to participate in RTO deliberations, none of whom are the general public). See also Shelley Welton, *Decarbonization in Democracy*, 67 UCLA L. REV. 56, 98-99 (2020) (noting that agency deliberations are dominated by "repeat monopoly corporate players"). A detailed analysis of two FERC dockets prepared for this Article—the SEEM and MOPR dockets—confirms this. The SEEM docket contained a total of twenty-eight substantive documents, disregarding procedural matters such as motions to intervene. Of these, none were from members of the public. FERC Docket Comment Tracker, Nov. 5, 2021 (spreadsheet on file with authors). Similarly, in the MOPR Docket, none of a total of fifty-two substantive comments were submitted by members of the public. *Id.* Another example will suffice. In June 2021, FERC established a Joint Federal-State Task Force on Electric Transmission. Fed. Energy Regul. Comm'n, Joint Fed.-State Task Force on Elec. Transmission, 175 FERC ¶ 61,224, at P 1 (June 17, 2021). The members of this Task Force are exclusively the FERC Commissioners and representatives from ten state PUCs, even though the governing section of the FPA, section 209, empowers FERC to select more broadly "members . . . from the State or each of the States affected . . . by such matter." 16 U.S.C. § 824h(a). Fed. Energy Regul. Comm'n, Order Listing Members, Announcing Meeting, and Inviting Agenda Topics, 176 FERC ¶ 61,131 (Aug. 30, 2021).

current governance structures, there is no likelihood that RTOs would *sua sponte* create broad-based participatory mechanisms that would facilitate this type of sweeping change. We do not mean to slight the contribution of the advocates who are working diligently to change the situation. Instead, we propose to support them by giving them a framework for how to propose rebuilding, as described more fully in Part II.²³⁹

Recent developments on this front are not encouraging. For example, utilities in the southeastern states filed a proposal in February 2021 with FERC to create an RTO-like Southeast Energy Exchange Market (SEEM).²⁴⁰ Given the enormous implications for ratepayers in these states,²⁴¹ we would expect input to come from more than the usual suspects (utilities and energy and environmental public interest groups), but it largely did not.²⁴² The design process received criticism, much of which reflects the concerns embodied in our rebuilding principles. When FERC sought more input, it largely engaged the utilities that advanced the proposal, not the public at large.²⁴³ And the result hardly

239. *See supra* Part II.

240. SEEM began as a tariff filing by the utilities involved and took effect by operation of law due to the deadlock of FERC Commissioners. Notice of Filing Taking Effect by Operation of Law, 86 Fed. Reg. 57821–22 (Oct. 13, 2021).

241. Two recent reports point to enormous potential cost savings and emissions reductions by adopting market mechanisms other than SEEM, such as a new RTO in the Southeast. CHRISTOPHER T. M. CLACK, ADITYA CHOUKULKAR, BRIANNA COTÉ & SARAH A. MCKEE, VIBRANT CLEAN ENERGY, MAXIMIZING COST SAVINGS AND EMISSION REDUCTIONS: POWER MARKET OPTIONS FOR THE SOUTHEAST UNITED STATES 3 (2021) (“The ‘SEEM’ scenario shows the lowest cost savings of all the scenarios modeled along with the lowest emission savings.”); ERIC GIMON, MIKE O’BOYLE, TAYLOR MCNAIR, CHRISTOPHER T. M. CLARK, ADITYA CHOUKULKAR, BRIANNA COTE & SARAH MCKEE, SUMMARY REPORT: ECONOMIC AND CLEAN ENERGY BENEFITS OF ESTABLISHING A SOUTHEAST U.S. COMPETITIVE WHOLESALE ELECTRICITY MARKET 1 (2020) (estimating as much as \$384 billion of potential economic savings—2.5 cents per kWh or 29% reduction in current rates—in a transition to an RTO in the Southeast).

242. *Supra* note 237 and accompanying text.

243. *See, e.g.*, Letter from Fed. Energy Regul. Comm’n Off. of Energy Market Regul., ER21-1111-000 et al. (May 4, 2021) (deficiency letter asking numerous questions to the filing utilities about the proposal); Catherine Morehouse, *FERC Has More Questions for Duke, Dominion on Southeast Energy Market Proposal*, UTIL. DIVE (June 9, 2021), <https://www.utilitydive.com/news/duke-southern-other-utilities-provide-more-details-to-ferc-on-proposed-sou/601494/> (describing a follow-up letter). Summing up the activity that led to SEEM going into effect, one observer stated, “the utilities that formed SEEM[] did it mostly behind closed doors.” John Engel, *The Latest on SEEM, FERC, and the Impact on Renewable Energy*, RENEWABLE ENERGY WORLD, Aug. 20, 2021 (quoting Jeff Dennis, managing director and general counsel, Advanced Energy Economy). *See also* Maggie

conforms to our criteria for a new entity. When SEEM took effect in October 2021 due to a 2-2 deadlock of FERC Commissioners,²⁴⁴ dissenting Commissioners (Clements and Glick)²⁴⁵ and public interest groups raised serious and unaddressed concerns about the result.²⁴⁶

This will not do. If an entity must end, and another must be redesigned—or if a new one is created—both the redesign process and the resulting regulatory relationships must involve broad-based participation by stakeholders. Once a redesign is complete, the quality of stakeholder participation in the day-to-day workings of the resulting entity must look very different from participation today. Without this caveat, the numerous decisions involved in rebuilding could be skewed in favor of the status quo by those who would and do oppose change.

As an example, we have noted that the judgment about whether red flags are present and rebuilding is necessary will be approached differently by different actors, some of which would simply deny that the need for progress is present. A utility that benefits substantially from payments from an RTO's capacity market is unlikely to view that market unfavorably. A utility that controls the local market due to transmission constraints is unlikely to support more transmission.²⁴⁷ Still, assume for the moment that

Shober, *Responses to FERC Deficiency Letter on SEEM*, CLEANENERGY.ORG (July 1, 2021), <https://cleanenergy.org/blog/responses-to-ferc-deficiency-letter-on-seem/> (criticizing the “lack of transparency” in the SEEM deliberations). That FERC does have the authority to do better has been well understood for years. 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 (2007) (FERC may consider “economic concerns of non-participants who are indirectly, but heavily, affected by wholesale power and transmission transactions”).

244. Pursuant to section 205(g) of the Federal Power Act, a tariff filing on which FERC reaches a deadlock without an “order accepting or denying the change” is deemed accepted by operation of law. 16 U.S.C. § 824d(g)(1).

245. FED. ENERGY REGUL. COMM’N, STATEMENT OF CHAIRMAN GLICK, ER21-1111-002 (Oct. 20, 2021); FED. ENERGY REGUL. COMM’N, COMMISSIONER CLEMENTS’ FAIR RATES ACT STATEMENT ON SOUTHEAST EEM (SEEM), ER21-1111-002 (Oct. 20, 2021).

246. Rich Heidorn, Jr., *Southern, Duke Defend SEEM at Renewables Conference*, RTO INSIDER (Nov. 22, 2021), <https://www.rtoinsider.com/articles/29119-southern-duke-defend-seem-renewables-conference>; Maggie Shober, *FERC Deadlocked, SEEM Moves Forward*, CLEANENERGY.ORG (Oct. 13, 2021), <https://cleanenergy.org/blog/ferc-deadlocked-seem-moves-forward/> (summarizing objections and referencing filings and blog posts).

247. Meyer, *supra* note 47 (“Utilities, in particular, resent transmission because it weakens their ability to control local power markets.”).

a regulated party could disregard its profit motive, or a regulator could put aside the tendency to regulatory capture. If these actors were to contemplate rebuilding, they face a fundamental choice: whether an entire entity must be eliminated, whether a specific market or program needs to be rebuilt, or whether a different regulatory relationship must end. Throughout this Article, we have consistently noted the tendency to settle for incremental solutions, which would lead most decision-makers to eschew bold solutions in favor of tinkering with programs at the margins. A broader group of participants will bring in perspectives that might help alter this dynamic.²⁴⁸

3. Lack of Self-Centricity

We term our final criterion “self-centricity,” or, to be more accurate, its removal. If governance structures in existing institutions tasked with the twin tasks of valuing resources fairly and fostering broad-based participation are irreparably skewed toward perpetuating actors’ self-interests, then new institutions must be created. Anything less will simply enable self-protection. Consider the Integrated Resource Plan (IRP) process, currently used by over 30 states, largely those without retail restructuring.²⁴⁹ The original purpose of the IRP process was to prompt utilities to consider all possible options for meeting demand, including demand-side alternatives.²⁵⁰ But there has long been criticism that IRPs are produced by utilities with little other stakeholder input

248. Bringing larger numbers of actors into the process might be more resource intensive, especially in terms of time. However, additional participants—and the additional scrutiny that they provide for utility actions—may end up leading to more cost-effective solutions during the clean energy transition. Because utilities will not be able to simply implement their proposed solutions, which invariably lead to more rate base and higher bills, the process may be more expensive, but a more democratic process may end up being less expensive overall for captive ratepayers.

249. As of 2015, according to the PowerSuite database maintained by the Advanced Energy Economy, thirty-six states require IRPs or their equivalent to be filed with a PUC. Coley Girouard, *Understanding IRPs: How Utilities Plan for the Future*, ADVANCED ENERGY UNITED (Aug. 11, 2015, 4:59 PM), <https://blog.advancedenergyunited.org/understanding-irps-how-utilities-plan-for-the-future>.

250. Ralph Cavanagh, *Least-Cost Planning Imperatives for Electric Utilities and Their Regulators*, 10 HARV. ENV'T L. REV. 299 (1986).

and regulatory oversight.²⁵¹ This allows utilities to structure IRPs in the way most advantageous to them, with assumptions in their models that favor specific projects.²⁵² Most go into effect with few comments, and even where comments are made, they rarely change the outcome.²⁵³ One recent example—the IRP Dominion Energy submitted to South Carolina regulators in 2020—is noteworthy as a rare example of successful regulatory oversight.²⁵⁴ Dominion’s first submission did not model (and therefore did not propose) additional renewable resources or coal plant retirements, or any demand side management options.²⁵⁵ A more obvious statement of self-centricity is hard to find. When the PSC rejected this plan, the utility modeled and included more options in a revised plan. Without that regulatory action, which again stands out from the pack for its rarity, the utility’s self-centric actions would have succeeded.²⁵⁶ As discussed above in Part II, we have shown that this

251. A frequently expressed concern is that IRPs depend heavily on the quality of utility modeling; when models discount the value of specific types of projects such as energy efficiency, they are not chosen for the plans. *See, e.g.*, Jake Duncan and Dallas Burtraw, RESOURCES FOR THE FUTURE, DOES INTEGRATED RESOURCE PLANNING EFFECTIVELY INTEGRATE DEMAND-SIDE RESOURCES? 2 (2018) (study of 8 utility IRPs that found modeling “did not adequately investigate the potential of demand-side resources”).

252. *Id.* *See also* Lincoln L. Davies & Victoria Luman, *Incomplete Integration: Water, Drought, and Electricity Planning in the West*, 31 J. ENV’T L. AND LITIG. 167 (2016) (arguing that IRPs in the arid West do not take water consumption into account and that regulators should mandate utilities take water availability into account in their plans).

253. *See, e.g.*, Great River Energy’s 2018–2032 Integrated Resource Plan, ET-2/RP-17-286 (Minn. Pub. Util. Comm’n Nov. 28, 2018), <https://www.edockets.state.mn.us/EFiling/edockets/searchDocuments.do?method=showPoup&documentId=%7bB02E5C67-0000-CF1C-8E39-A783060F4C2D%7d&documentTitle=201811-148088-01> (where comments had requested multiple, immediate changes including the filing of a new plan but the Minnesota Public Utilities Commission largely agreed with the utility).

254. South Carolina Energy Freedom Act (H.3659) Proceeding Related to S.C. Code Ann. § 58-37-40 and Integrated Resource Plans for Dominion Energy South Carolina, Incorporated, Docket No. 2019-226-E (Pub. Serv. Comm’n S.C. Feb. 28, 2020) (filing of Dominion Energy 2020 Integrated Resource Plan, <http://www.energy.sc.gov/files/2020%20Dominion%20IRP.pdf>).

255. Van Voorhis, *supra* note 205.

256. Duke Energy, not learning from Dominion’s experience less than six months prior, had their IRP also rejected by South Carolina regulators in June 2021, mainly because the company made assumptions in devising their plan that underestimated the cost of natural gas and used implausibly high costs for renewables and storage. Scott Van Voorhis, *South Carolina Regulators Reject Duke’s Long-Term Power Plant Construction Plans, Call for Changes*, UTIL. DIVE (June 21, 2021), <https://www.utilitydive.com/news/south-carolina-regulators-reject-dukes-long-term-power-plant-construction/602105/>.

is not atypical; when left to their own devices, utilities will favor their own interests.

Regulatory capture theory would view the shortcomings of IRPs and similar processes as a problem stemming from utilities' dominance of specific governance structures.²⁵⁷ Yet as we now view it, self-centricity involves considerably more than that. If utilities—or any other actor or single interest group for that matter—consistently act in their self-interest to the point where that interest dominates an existing institution, they should be ended and rebuilt. For example, the value of solar tariff discussions are not inherently skewed toward regulatory capture. Yet if they consistently result in utilities convincing regulators to inadequately price the true value distributed solar is providing to the grid, underpaying those who spend private capital to deploy these systems, we conclude that the decision-making processes exhibit self-centricity and should be rebuilt.

B. Decision Makers in the Rebuilding Process

So far, we have analyzed what form of decision must be made and which criteria should govern it. We turn our attention now to a different set of questions: who are the decision makers involved in rebuilding, and by what process do they make their decisions? To put it mildly, this inquiry is novel. The existing literature neither contemplates rebuilding nor identifies those responsible for it. At the risk of seeming self-evident, those who dominate current governance structures are extremely unlikely to act against their own self-interest and eliminate a status quo that favors them.²⁵⁸ Thus, we believe a decision to eliminate all or part of a current governance institution must be made by actors other than those which currently hold a governing majority or other indicia of power in the institution itself. To effect change, the decision makers

257. Payne, *Game Over*, *supra* note 75.

258. One noteworthy example is the difficulties of adopting progressive climate policies in certain RTOs, such as PJM and NE-ISO, because large incumbent utilities hold power in the governance structures. CHRISTINA SIMEONE, KLEINMAN CTR. FOR ENERGY POL'Y, PJM GOVERNANCE: CAN REFORMS IMPROVE OUTCOMES? 3 (2017); Welton, *Rethinking Grid Governance*, *supra* note 6, at 241 (citing RTOs' "dilatatory tactics" in embracing clean energy). See also JUSTIN GUNDLACH AND ROMANY WEBB, SABIN CTR. FOR CLIMATE CHANGE L., CLIMATE CHANGE IMPACTS ON THE BULK POWER SYSTEM: ASSESSING VULNERABILITIES AND PLANNING FOR RESILIENCE 3 (2018) (criticizing RTOs for their lack of a "comprehensive assessment of climate risks").

must either currently have the authority to change the entity's composition and structure (or eliminate it entirely) or be given such authority by an entity that does, such as a state legislature or Congress.

As we have discussed, assigning any decision maker with the task of rebuilding requires considerably more holistic focus than that decision maker has likely exercised before. If rebuilding is done, it must follow the framework we have laid out here, adhering to our three design principles. We find it unlikely that participants in current governance structures would immediately establish a new framework for evaluating the situation and simultaneously disregard the existing tendency to adhere to the status quo. As an example, it has taken a number of years to begin to value electricity generated from solar appropriately. Along the way, utilities have thrown up numerous roadblocks to progress, such as the insistence on onerous demand charges for those who deploy solar systems, cumbersome and lengthy interconnection processes, or advocacy for formulas that seriously diminish the value of electricity generated from solar to the grid.

All of this is well known to those who have studied the existing grid governance landscape. For whatever reason, however, scholars have not reached what seems to us to be the obvious conclusion: an entity other than the one being evaluated for rebuilding, but which has authority over it, must be the decision maker. At the federal level, FERC, not the RTOs, must ultimately bear responsibility for deciding whether RTO markets or the RTOs themselves must end.²⁵⁹ As we have noted above in Section A.2, the redesign process and the resulting rebuilt entity must involve broad participation by stakeholders. This means that clean energy advocates, energy justice advocates, ratepayer advocates, and others must take part, not just those who can typically figure out how to take part in a FERC proceeding.

In any redesign of RTOs or the entities they administer, the impetus for change must come from FERC, which can and should issue an order requiring redesigns to take place in a process that involves as many stakeholders as possible. At present, FERC is not

259. FERC's requirements for open access to transmission and stated criteria for RTOs are grounded in its authority under the Federal Power Act to remedy undue discrimination in the provision of services by those entities under its jurisdiction. Eisen, *FERC's Expansive Authority*, *supra* note 8.

accustomed to doing this. The strengthening of the Office of Public Participation (OPP) is as salient an indicator as any that FERC has struggled with bringing effective public input into its decisions.²⁶⁰ At a minimum, OPP would allow for more public input into specific FERC licensing and regulatory decisions. A robust OPP might even help with participation, and, for that matter, all of our rebuilding principles: if it would help us move toward all resources being counted and valued for their contribution to the grid, then it would be useful. But unless the fundamental structure of public input were to change, it is unlikely that OPP's efforts would help so significantly. We understand that *ex ante* this may be difficult to assess, but we note that there are significant hurdles to overcome at present, given the current landscape of public participation in decisions relating to RTOs.

At the state level, the picture is more complex. No state regulator or other entity has attempted anything at the scale at which we discuss it: removing entities altogether from their current positions in the governance structure. Even the most daring PUCs have backed off from ambitious proposals that suggested that rebuilding might take place. New York's original idea in the REV was to remove utilities' control of the distribution system in favor of independent operators. As noted above in Part I, at the point where it looked like utilities' stranglehold on distribution systems would be ended, the PSC backed off this idea in favor of retaining utilities' control.²⁶¹ Indeed, the PSC wound up giving more responsibility to utilities than they already had.

This suggests that an entity other than the PUC should be involved in rebuilding decisions. A PUC could, on its own initiative, create a new decision-making entity and task it with the requisite authority. If the problem is a PUC's regulatory capture (as is often the case), then a state legislature can reconfigure a PUC's statutory mandate. An amended statute could provide for the creation of a new decision-making entity that would in turn wrest some power away from the PUC and give it to a new, rebuilt entity.

260. Stemplewicz, *supra* note 214; FED. ENERGY REGUL. COMM'N, FERC REPORT ON THE OFFICE OF PUBLIC PARTICIPATION 6 (2021) ("[T]he long-term, complex nature of many Commission proceedings and financial barriers make public participation at the Commission difficult and that OPP must better equip people to participate.").

261. *Supra* note 134 and accompanying text.

This may be difficult to accomplish if the legislature is beholden to utility interests.

IV. APPLICATION IN PRACTICE: CAPACITY MARKET, EXAMPLE OF PJM MOPR / UTILITY FRRS

So far, we have focused on the whys and hows of rebuilding grid governance. Now we apply our approach in practice. This means thinking about how both decisions would be made: whether to end a grid institution or not, and how to replace an entity that has been removed. Our specific context involves the MOPR concept first discussed in Part II. There, we described the many attempts to impose and then refine a minimum price for state subsidized resources and cited this as an example of all three of our red flags: administrative dysfunction, utility indifference, and incapacity.²⁶² As evidenced by the tortured history of multiple close-in-time rulemakings, the MOPR process suffers from administrative dysfunction. Beyond the simple fact of repeated attempts to cure the problem, the MOPR process easily fits our notion that a broad spectrum of stakeholders agree that the current course of policy action is problematic. In the case of the MOPR, state stakeholders, renewable electricity generators, and public interest groups have found fault with it. The defenses for it are weakly advanced. In Part II we discussed MOPR as an example of utility indifference through increasing the costs of renewable generation at the insistence of merchant generators, and incapacity for attention to changing the generation mix at the speed necessary.

Given that all three red flags are present, we believe it is necessary to decide that it is time to rebuild by conceptualizing a way to end the MOPR. Then, we would apply our rebuilding principles to decide what should take its place. Once we do that, we observe that the status quo follows none of our three principles. With respect to resource agnosticism, the capacity market with a MOPR in place does not appropriately value any particular generation source's contribution to the grid. What it values is the capacity that generation source represents to be on standby for a particular point in time. It could even be said to be the polar opposite of resource agnosticism in its current construct, as it penalizes some resources that have "state subsidies." In its current

262. *Supra* Part II.

form this means that renewable electricity generators must obey the requirement to sidestep their subsidy and offer their output at a minimum price, a requirement to which fossil fuel generators are not subject.

The status quo is no model of broad-based participation. Indeed, it is exactly the opposite. As we noted above in Part II, there is ample literature on the difficulties for interested members of the public to provide input into RTO processes. FERC is attempting to change this with a more robust OPP, but there is considerable work to be done. In discussions and decisions about market designs, RTOs and FERC take the knowledge, secrecy, and intimidation around participation to another level completely. Participation is restricted to a limited number of insiders.²⁶³ It is challenging (to say the least) for those who are familiar with the market and its dynamics to take part in decision making or governance, but for members of the public, it is well-nigh impossible. The market development structure seems to have been designed intentionally to discourage participation. In one case, members of the press were banned from recording a public meeting.²⁶⁴ Even in public RTO meetings, members of the press are expected to identify themselves.²⁶⁵

Finally, the existing institutions tasked with MOPR changes are irreparably skewed toward the self-centricity of utilities and large-scale fossil generators. And we reiterate that this means that the very institutions proposing changes to the MOPRs—the RTOs/ISOs—are, by their own rules, not set up to do it. RTOs/ISOs were set up with specific mandates to administer transmission lines and operate wholesale markets. With its thumb on the scale for specific resources, the MOPR is outside of this *raison d'être*. Thus, we need an alternative to the status quo. In the next section we explain the possible alternatives and determine how we could

263. KYUNGJIN YOO & SETH BLUMSACK, RTO GOVERNANCE AND CAPACITY MARKET OUTCOMES, 6–7, (Sept. 20, 2019) <https://www.cmu.edu/ceic/events-seminars/blumsack-ceic-04012020.pdf> (showing distribution of voting entities in PJM); SIMEONE, *supra* note 258, at 3.

264. Rich Heidorn Jr., *FERC Rejects NEPOOL Press Membership Ban; Narrow Ruling Leaves Transparency Issue in Question*, RTO INSIDER (Jan. 29, 2019), <https://www.rtoinsider.com/articles/21763-ferc-rejects-nepool-press-membership-ban>.

265. PJM's Code of Conduct makes this explicit. PJM INTERCONNECTION CODE OF CONDUCT § 4.5, (2022), <https://www.pjm.com/-/media/committees-groups/forums/stakeholder-process/2021/20210125/20210125-item-02-manual-34-media-guidelines-revised.ashx>.

rebuild with a solution that better embodies all three of our rebuilding principles.

A. Options for MOPR Rebuilding

Three primary alternatives to the MOPR status quo have been mentioned at one point or another by various stakeholders. The first is for states to adopt the Fixed Resource Requirement (FRR) and move back to a self-supply model for resource adequacy.²⁶⁶ Under this option, an individual utility with service obligations or an entire state may secure the resources it needs outside the RTO/ISO capacity markets, assuming those resources meet their reliability requirements. The second option, which we term the “incremental” option, is to retain the MOPR but continue to reform it in gradual fashion, specifically to treat clean energy resources more fairly. The third option is to eliminate the MOPR by ending the capacity market altogether and rely on reforms to regional wholesale energy markets to incorporate more clean energy and treat it fairly in the pricing structure.

While the FRR/self-supply and incremental options may be able to meet some of our rebuilding principles, only the third option—eliminating MOPR and the capacity markets—has the ability to meet all three. In this section we discuss the limitations of the first two options; in the following section we advance the reasons for adopting the third.

1. FRR/Self-Supply

From the advent of the capacity market, the FRR/self-supply option has been available to load-serving entities (LSEs). Some use FRR regularly,²⁶⁷ but wider use of this option was not seriously

266. An IOU, cooperative, or public utility may elect the FRR in lieu of participating in the capacity market, provided that it meets requirements established by PJM. PJM INTERCONNECTION, SECURING RESOURCES THROUGH THE FIXED RESOURCE REQUIREMENT (2020). For a description of how the FRR works in practice, see MAX CHANG, JASON FROST, COURTNEY LANE & STEVE LETENDRE, SYNAPSE ENERGY ECONOMICS, THE FIXED RESOURCE REQUIREMENT ALTERNATIVE TO PJM’S CAPACITY MARKET: A GUIDE FOR STATE DECISION-MAKING (2020).

267. *FRR – LSE Capacity Rates*, PJM INTERCONNECTION, <https://www.pjm.com/markets-and-operations/billing-settlements-and-credit/fr-lse-capacity-rates> (last visited Mar. 7, 2023) (rate information for utilities that have elected the FRR in PJM); Rich Heidorn, Jr., *Dominion Opts Out of PJM Capacity Auction*, RTO INSIDER (May 5, 2021), <https://www.rtoinsider.com/articles/20192-dominion-opts-out-of-pjm-capacity-auction>.

contemplated until recently. During the MOPR drama, multiple states opened investigations into whether it would be more advantageous for their citizens if LSEs procured electricity through the FRR option rather than the organized capacity markets. Expanded use of this option would weaken the capacity markets over time, as less capacity would be procured through those auctions and more would be procured outside the markets. Over time, this could lead to the collapse of those markets.

While the end of capacity markets may well be a desirable outcome, bringing it about through exogenous action would not conform to our rebuilding principles. When states procure resources through bilateral contracts under the FRR, it is not necessarily constrained to be resource agnostic. There is no certainty that all states would take carbon emissions into account, or fairly value clean energy resources, and indeed some might turn to fossil fuel resources to meet demand. And the FRR process leaves procurement decisions up to utilities, with no significant public participation in decision-making.²⁶⁸ Finally, self-centricity would be a prominent and recurring concern for an FRR option controlled in part or wholly by a utility, where the lure of self-interest would be great. Thus, expanding the FRR/self-supply option, depending on specific circumstances and a state's regulatory mien, might not conform to any of our rebuilding principles.

2. Incremental MOPR Reform

We do not favor incremental MOPR reform, but we include it here as an option because there has been recent active movement in this direction. In particular, the most recent MOPR reform proposal—using restrictions that impact only the sort of state intrusion in the wholesale markets that the Supreme Court invalidated in *Hughes v. Talen*—might be viewed as removing our red flags.²⁶⁹ But there is just as much, if not more, reason to think that the process will continue to be problematic. As with utility recalcitrance around climate change, there have been plenty of opportunities throughout the various MOPR iterations to put our

268. Sarah Vogel song, *Dominion's Exit from Regional Capacity Market Raises Some Eyebrows—and Questions*, VA. MERCURY, May 25, 2021 (noting that there was no public proceeding for Dominion's exit from the PJM capacity market and that none would be required under Virginia law).

269. *Supra* notes 146-161 and accompanying text.

overriding principles into action. This has not occurred, and there is no reason to surmise that it will happen now.

It is difficult to see how incremental MOPR reform would adhere to our rebuilding principles. In its current proposed iteration, it is possible that the MOPR could be more resource agnostic than it is at present. Indeed, adoption of a line such as the one specified in *Hughes v. Talen* could accomplish much toward this goal, as it would reverse many of the barriers present in previous MOPR designs. Yet this would still not be adequately mitigating carbon emissions, but just not disfavoring most clean energy resources. As for public participation, there is nothing in the most recent MOPR proposal that would change the current unfavorable dynamic in RTO decision-making. It is far more likely that participation in any further incremental MOPR docket would mirror what it has been for the last several iterations. Given the decision makers that currently dominate RTO/ISO governance, it is also likely that any incremental solution will maintain the same level of self-centricity that existed for previous iterations. Therefore, it is very likely that any incremental MOPR reform will not meet our rebuilding principles.

B. Better Yet . . . the Preferred Alternative

Neither of the two main ways proposed for moving forward on the MOPR stalemate conforms to our rebuilding principles. In this section, we advance a different option: ending the MOPR and capacity markets altogether. This preferred alternative starts from a place that others have suggested, and would adhere to our principles of resource agnosticism, participation, and lack of self-centricity. We believe it can meet the goals, writ large, of resource adequacy, respecting state policy, and clean energy adoption.

In RTOs/ISOs which have capacity markets, eliminating them would leave energy-only markets. Those who have pushed for energy-only markets use the current market construct in ERCOT as the example of how an energy-only market should be designed and operated: high energy prices will dictate when new capacity needs to enter, persistent low energy prices will drive inefficient and uneconomic generators to shut down, and the lack of regulation overall provides that all this occurs with low transaction costs, enabling the market to function in a more “perfect” way.

Our preferred alternative takes a different tack. As Winter Storm Uri demonstrated in February 2021, a Texas-like market is not the utopia that some would like to believe.²⁷⁰ The lack of regulation led to dire consequences: power plants failing due to winter conditions for which they were unprepared, despite previous similar cold spells that had impacted some of the very same generators; natural gas infrastructure failing at the wellheads and pipelines un-operational and therefore unable to deliver whatever natural gas was being produced;²⁷¹ a grid unable to import electricity from its neighboring regions due to intentional lack of interconnections (as a purposeful means to evade federal regulation).²⁷² These combined to destabilize the grid, requiring massive amounts of load shed in order to mitigate against a complete blackout occurring (which still came incredibly close to happening and which would have required months to correct).²⁷³ This left hundreds of thousands without light, heat, hot water, or the ability to cook, during a global pandemic when gathering with others was dangerous and when travel was treacherous due to the weather conditions, leading to hundreds of deaths over the course of three days.²⁷⁴

To be blunt, there is no reason to replicate this disaster elsewhere. Therefore, we propose that other RTOs change their wholesale markets to be energy-only markets, with more fully regulated designs that adhere to the principles of resource agnosticism, participation, and a lack of self-centricity. There are other considerations in such markets, of course. Whether energy-only markets prompt new investment in generation

270. See generally Mays et al., *supra* note 106.

271. N. AM. ELEC. RELIABILITY CORP., FEBRUARY 2021 COLD WEATHER GRID OPERATIONS: PRELIMINARY FINDINGS AND RECOMMENDATIONS (Sept. 23, 2021); Peter C. Cramton, *Fostering Resiliency with Good Market Design: Lessons from Texas* 8 (ECONtribute Discussion Paper, No. 145, 2022).

272. *Id.* at 24 (“Grid independence was a conscious and popular choice of Texan policymakers to remain free of regulation by the Federal Energy Regulatory Commission.”).

273. *Id.* at 9.

274. *Id.* at 1 (citing a figure of 246 storm-related deaths); Andrew Weber, *Texas Winter Storm Death Toll Goes Up To 210, Including 43 Deaths in Harris County*, HOUSTON PUB. MEDIA, July 14, 2021 (citing the same figure). As a July 2021 report noted, the actual figure might be much higher because the reported numbers include direct deaths from causes like hypothermia, but not cases where deaths occurred after the storm, such as a death from a heart attack where storm stress triggered a pre-existing health condition. *Id.* And the number of deaths from COVID-19 infections which might have been prevented will never be known.

without capacity markets in place has been questioned.²⁷⁵ We believe it may be possible to design energy-only markets to avoid this problem, with innovations such as mandatory forward contracts.²⁷⁶ To set forth the details of such a design is beyond the scope of the current inquiry, which focuses on governance considerations. It would require a lengthy discursion through the economics literature, and we have therefore not addressed it here. For now, we concentrate on how an energy-only market can meet our core principles, recognizing that more refinement of the design would be necessary.

1. Resource Agnosticism in an Energy-Only Market

A resource agnostic energy-only market should incorporate two specific design features to govern bidding from electricity generators. First, as suggested in the most recent MOPR iteration, it should set the bounds of impermissible subsidization at the Supreme Court's predetermined line, as set out by *Hughes v. Talen*. That is, unless a resource receives a direct monetary subsidy above the market price for electricity, the fact that state clean energy policies may give it an advantage should be irrelevant in the bidding process. Second, it should use carbon pricing as part of calculating bids and, therefore, determining dispatch order. This is not a novel concept, as some RTOs are considering the adoption of carbon pricing mechanisms. We simply believe it should be mandatory in the energy market design.

Embedding these two mechanisms in the design of an energy-only market would serve numerous goals. First, it would allow state policy objectives to be seamlessly adopted with no additional action taken or required. Adopting the line already delineated by the Supreme Court enables all actors (states, generators, and policy advocates) to know exactly where that line is, and what incentives can and cannot be used to encourage the development of clean energy resources. Should a state want to provide subsidies or incentives that could lower the price a given resource bids into the market, or even make a specific resource a

275. See, e.g., Paul L. Joskow, MIT CTR. FOR ENERGY AND ENV'T POL'Y RES., CHALLENGES FOR WHOLESALE ELECTRICITY MARKETS WITH INTERMITTENT RENEWABLE GENERATION AT SCALE: THE U.S. EXPERIENCE 12 (2019); Spence, *supra* note 106, at 1008-12 (discussing regulatory interventions to assure adequate supply).

276. Mays et al., *supra* note 106, at 375-76, discusses this possibility.

price taker (allowed to bid at zero and take whatever price it can get), it should be allowed to do so. Second, having carbon pricing as part of determining dispatch order also ensures that the cheapest electricity with carbon externalities factored in is dispatched. This protects ratepayers by ensuring that, even taking cost into account, they pay as little as possible for the climate change damage that generating electricity can cause.²⁷⁷

Carbon pricing as part of the dispatch order in energy markets will also hedge against uneconomic and ill-conceived state actions. If a coal- or natural gas-producing state seeks to subsidize coal- or natural gas-fired power plants to reduce their costs and therefore enable them to submit lower bids, these plants may well look like the most expedient options without taking carbon emissions into account. However, they would not be, because the market design would not adequately address the climate change externalities. Therefore, carbon pricing must be taken into account in calculating dispatch order, ensuring that fossil fuel resources (including biomass) are only dispatched when they would be economical including the warming that electricity production would force on the planet.

2. Broad-Based Participation in Energy Markets

We reiterate what we said in Part II: if an entity must end, and another must be redesigned, the redesign process and the resulting regulatory relationships must involve broad participation by stakeholders. Starting with the redesign process, it is imperative that it feature broad-based participation akin to what FERC currently does in its technical conferences, with resources available to encourage participation by a wider spectrum of interests.

The quality of stakeholder participation in the day-to-day workings of an energy-only market would also look very different from participation today. In a more heavily regulated energy-only market, we envision multiple decision points that would require active participation from a diverse group of constituents. At what level should carbon be priced? How should that change over time,

277. Bethany Davis Noll & Burcin Unel, *Markets, Externalities, and the Federal Power Act: The Federal Energy Regulatory Commission's Authority to Price Carbon Dioxide Emissions*, 27 N.Y.U. ENV'T L.J. 1 (2019). As one author has noted elsewhere, it is already well known that ratepayers will pay more for electricity due to climate change damage. Payne, *Unservice*, *supra* note 11.

automatically or through proceedings at set intervals? Should another adder be considered for fossil resources in historically disadvantaged communities to address co-pollutant impacts? What market rules are needed for resilience, and how should those be implemented? Time does not permit us to advance a particular market structure that would respond to these pressing questions, but we do note that there should be an ongoing effort to do so, with rules that engage the broadest possible group of stakeholders possible and do not erect barriers to participation.

3. Market Designs to Avoid Self-Centricity

Two main requirements must be made in the regulation of the energy-only market to address the vast potential for self-centricity that would otherwise exist: (1) no self-supply; and (2) no FRR. While these might at first blush look like the same requirement, they are different. No self-supply is precisely what it sounds like: a generator, either in a regulated entity or through an unregulated subsidiary, may not supply customers of a monopoly in any way connected with it directly; all that energy must clear through the energy market. While an FRR is similar in certain situations, it may also include meeting demand through long-term contracts in addition to self-supply from the monopoly utility. This should not be allowed as an option precisely because of the self-dealing aspect that occurs with any level of self-supply.

There will be criticisms of these requirements, leveled most from monopoly utilities with uneconomic fossil assets but also from public power and from scholars who say “I think I’ve seen this film before and I didn’t like the ending . . . so I’m leavin’ out the side door”²⁷⁸ because of what happened with the California energy-only buy-all, sell-all market experiment in 2000. The uneconomic fossil assets owned by investor-owned utilities prove the point as to why these requirements are necessary and therefore that criticism warrants no further discussion. But let us take the other two in turn.

Many public power authorities—municipal utilities and electric cooperatives—own generation either directly or through

278. TAYLOR SWIFT FT. BON IVER, EXILE (2020).

generation and transmission (G&T) cooperatives.²⁷⁹ Many of these organizations have undepreciated fossil assets which are uneconomic if forced to compete in a market. The argument from public power around self-supply has always been slightly different from that of investor-owned utilities; but basically, the argument is that they do not have shareholders to pick up the cost of undepreciated assets. Rather, all costs must be paid by their ratepayers, which puts them at a significant disadvantage if assets must be prematurely retired. Therefore, the argument goes, they must be allowed to operate—at maximum capacity—whatever generation assets they have an ownership interest in, regardless of what impact that might have on the broader market (or the planet).

We fundamentally disagree that municipal utilities and cooperatives should be allowed to play by separate rules, and therefore be allowed to continue to self-schedule. Continuing the current practice hurts ratepayers, both by making the electricity they are purchasing more expensive, and by ruining our collective home through climate change. This cannot be allowed to continue under the guise of the fact that prematurely shutting down assets may cause some financial hardship. While we recognize that hardship may occur and that public power associations may well try to obtain financial assistance at the state and/or federal levels to help offset the costs, that hardship cannot be used to allow self-scheduling to occur. The risks of perpetuating fossil plants which would otherwise be shuttered is simply too great and would run afoul of our guiding principles.

The California sell-all, buy-all debacle also necessitates some discussion. We agree that lessons must be learned from that failed experiment. But it is not, as might be guessed, that we should allow self-scheduling and self-dealing. We do not suggest that load-serving entities should not be allowed to contract for electricity delivery—they should. But those contracts must be arm's length transactions and may not involve two parts—even one regulated and one unregulated—of the same entity. If there is absolutely any corporate relationship between the two—same parent holding company, controlling stock position, parent/subsidiary, G&T association—no PPA or contract is allowed. That would violate the

279. *Public Power*, AM. PUB. POWER ASS'N, <https://www.publicpower.org/public-power> (last visited Mar. 7, 2023); *Electric Co-op Facts & Figures*, NAT'L RURAL ELEC. COOP. ASS'N (Apr. 28, 2022), <https://www.electric.coop/electric-cooperative-fact-sheet>.

principle around self-centricity. However, there is nothing in our preferred alternative that would disallow a load-serving entity to contract for electricity to be delivered, using a PPA, so long as there was no corporate relationship between the two; a utility could certainly contract, using a PPA, for all output from a solar installation owned by an unconnected third-party developer, for example. Along with adequate controls on manipulation—which have developed significantly since 2000—we feel this should be sufficient to mitigate any concern that a situation similar to what happened in California may reoccur.

CONCLUSION

We can anticipate the likely excuses that might be advanced against rebuilding of grid governance institutions: market uncertainty, financial instability for energy segment actors, potential impacts on customers (especially captive ones), maybe even a delay in addressing climate change. But these are the same reasons that actors use to insist that incremental change is sufficient. As the above discussion around our three red flags indicates, without ending current grid governance structures and developing new ones, progress toward a clean energy future will continue to suffer.

Some would characterize our energy system as a large ship—something whose trajectory cannot be changed quickly, and so incrementalism is the best that we can do; no better is possible. We disagree. Rather, we consider our current energy governance structures to be more like tectonic plates, which can move either slowly or—when earthquakes occur—with great force and surprising speed. And, as with earthquakes, rebuilding is often necessary.